PB89-235279

Superfund Record of Decision (EPA Region 2)
Clothier Disposal Site, Oswego County, New York
December 28, 1988. First Remedial Action

(U.S.) Environmental Protection Agency, Washington, DC

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Superfund Record of Decision:

Clothier Disposal, NY

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16. Abstract (Limit: 200 words)

The Clothier Disposal site is located in a rural area near the Town of Granby, Oswego County, New York. It is a privately owned, 15-acre parcel of land, of which approximately 6 acres have been used for waste disposal. Land use in the vicinity of the site is predominantly agricultural. A wetland passes through the site to the west of the area used for waste disposal. Ox Creek also flows through the site in a northerly direction, feeding into the Oswego River, and a portion of the site is located within the 100-year floodplain. Ground water flow patterns clearly indicate that flow is toward Ox Creek. In 1973, drums of chemical waste were discovered on the Clothier property, despite State denial of a landfill permit application. After the New York Department of Environmental Conservation brought suit, the owner made several attempts to clean up the property. These attempts, however, resulted in drums being broken and drained. Subsequently, additional dumping of roofing materials, household wastes and junked vehicles occurred at the site. Based on data from the remedial investigation and State sampling, EPA established the need for a removal action for 2,200 drums located onsite. A number of potentially responsible parties under an administrative order on consent removed 1,858 drums. EPA removed the remaining drums and visibly contaminated surficial soil and debris associated with the drums. This
(See Attached Sheet)

17. Document Analysis a. Descriptors

Record of Decision - Clothier Disposal, NY
First Remedial Action
Contaminated Media: soil
Key Contaminants: VOCs (PCE, toluene, xylenes), organics (PAHs, PCBs, phenols), metals

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement	19. Security Class (This Report) None	21. No. of Pages 94
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(See ANSI-Z39.18) *See Instructions on Reverse*

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16. Abstract (Continued)

Don't turn pg 1

remedy addresses the low-level residual soil contamination remaining on-site. If the results of ground water, surface water and sediment sampling determine a need to remediate the groundwater and/or the wetland, a subsequent operable unit remedy will be undertaken. The primary contaminants of concern affecting the soil are VOCs including toluene, xylene, and PCE; other organics including PAHs, PCBs and phenols; and metals.

The selected remedial action for the site includes placement of a one-foot soil cover over the contaminated areas and regrading and revegetation of the site; installation of rip-rap, as needed, on the embankment sloping towards Ox Creek to prevent soil erosion; construction and post-construction air monitoring; institutional controls preventing the utilization of the underlying ground water, or any land use involving significant disturbance of the soil cover; and long-term ground water, soil, sediment and surface water monitoring. The estimated present worth cost for this remedy is $500,000, which includes annual O&M of $27,000.

DECLARATION FOR THE RECORD OF DECISION

Site Name and Location

Clothier Disposal site, Town of Granby, Oswego County, New York

Statement of Basis and Purpose

This decision document presents the selected remedial action for the Clothier Disposal site. The selected remedial alternative was developed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), 42 U.S.C. Section 9601 *et seq.*, and, to the extent practicable, the National Contingency Plan (NCP), 40 C.F.R. Part 300, November 20, 1985. This decision is based on the administrative record for this site. The attached index identifies the items that comprise the administrative record upon which the selection of the remedial action is based.

The State of New York has concurred with the selected remedy.

Description of the Selected Remedy

All known drums of hazardous substances, surface and subsurface, totalling some 2,200 drums, have already been removed from the site, as has the majority of the visibly-contaminated surface soil associated with the drums. This remedy addresses the low-level residual soil contamination remaining on-site. The U.S. Environmental Protection Agency has determined that risk levels associated with this residual contamination are minimal, and within the range considered acceptable in Superfund remedies. The selected remedy provides additional protection by reducing the principal remaining threat at the site, namely, direct contact and ingestion of low-level contaminated soil, by covering the contaminated areas with one foot of clean soil.

This source control remedy does not address the groundwater and the adjacent 11-acre wetland. However, groundwater, surface water and sediment samples were collected from the site and the adjacent wetland during December of 1988. Results of these samples will be available for public review. If it is determined that there is a need to remediate the groundwater and/or the wetland, a subsequent operable unit remedy will be undertaken.

Carrying out the remedy described in this document will not prevent or hinder any future remedial activity that may be found necessary for the groundwater or the wetlands.

The major components of this remedial action are:

- Placement of a one-foot clean soil cover, brought from an off-site source, over the contaminated areas. Sampling will be performed during the design phase to determine the extent of the areas of residual contamination requiring covering.

- Regrading and revegetating the site to prevent soil erosion and to minimize surface water runoff towards neighboring properties, Ox Creek, and the adjacent wetland. The regrading plan and types of vegetation will be determined during the design phase, and will be compatible with the wildlife habitat.

- Installing rip-rap, as needed, on the embankment sloping towards Ox Creek to prevent soil erosion. The extent of the rip-rap will be determined during the design phase, and will consider the impact on the wildlife habitat.

- Performing long-term groundwater, soil and Ox Creek sediment and surface water monitoring to evaluate any changes should they occur. The long-term monitoring program will consider the installation of additional wells, including bedrock wells. Based upon the results of the monitoring program, sampling of the private residential wells in areas neighboring the site, and the deeper aquifer, would be performed, if warranted.

- Performing construction and post-construction air monitoring. This may also include, but is not limited to, pre-construction air monitoring and/or analyses to further delineate areas of the site requiring covering.

- Applying, to the extent possible, institutional controls to prevent the utilization of the underlying groundwater (e.g., through the drilling of wells in the shallow aquifer), the future development of the site for residential use, or any use involving excavation at the site or significant disturbance of the soil cover. Any institutional controls, including, without limitation, deed restrictions or easements, shall be consistent with New York State law.

Declaration

Consistent with CERCLA, as amended by SARA, and the NCP, I have determined that the selected remedy is protective of human health and the environment, attains Federal and State requirements that are applicable or relevant and appropriate to the remedial action, and is cost-effective. This remedy utilizes permanent solutions to the maximum extent practicable for this site. Because treatment of the principal threats of the site was not found to be necessary, this remedy does not satisfy the statutory preference for treatment as a principal element of the remedy.

Because this remedy will result in hazardous substances remaining on-site, a review will be conducted within five years after commencement of remedial action to ensure that the remedy continues to provide adequate protection of human health and the environment. Should this review show that this is not the case, additional action will be undertaken in full consultation with the public.

William J

William J. Muszynski, P.E.
Acting Regional Administrator

Dec. 28, 1988
Date

RECORD OF DECISION

CLOTHIER DISPOSAL SITE

GRANBY, NEW YORK

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2
New York

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SITE NAME, LOCATION, AND DESCRIPTION

The Clothier Disposal site is a privately owned 15-acre parcel of property, of which approximately 6 acres have been used for waste disposal (see Figure 1). It is located in a rural area on the south side of South Granby Road, in the Town of Granby, Oswego County, New York (see Figure 2). This location is about 7 miles south of the City of Fulton, 18 miles northwest of the City of Syracuse, and 16 miles southeast of Lake Ontario.

Land use in the vicinity of the Clothier Disposal site is predominantly agricultural. Fields bounding the site on the east and south are currently cultivated. A small sand pit located approximately 1,300 feet east of the site.

Due to the agricultural nature of the area, soil is considered to be the primary natural resource. A wetland passes through the site to the west of the area used for waste disposal. The wetland provides a haven for aquatic life and water fowl and birds which may migrate through the area.

The closest population center is the City of Fulton (1980 U.S. Census population 13,312). The population of Oswego County was 113,901 in the 1980 census. There are currently no residents on-site. The nearest residents are located approximately one-half mile to the east and west of the site, along South Granby Road and Ley Creek Road.

The Clothier Disposal site consists of a large swampy area along the margin of Ox Creek and the adjacent lands to the east, which lie about 5-15 feet above the swampy area. An east-west trending swale crosses the central portion of the site and channels runoff toward the creek. Other than this swale, surface drainage at the site is poorly defined.

Ox Creek itself flows through the site in a northerly direction, feeding into the Oswego River approximately 1 mile to the northeast. Ox Creek originates approximately 6.7 miles upstream from the Clothier Disposal site, and has a tributary drainage area of approximately 26 square miles, corresponding to an average flow rate of about 35 cubic feet per second, as it passes the site.

A geologic investigation of the site indicated that the site generally consists of a surficial mantle of clayey silt ranging in thickness from 5 to 7 feet, underlain by a relatively thick (4.5 to 30 feet) section of fine sand and silt. A layer of glacial till underlays these two units which, in the region, is typically found overlying bedrock. A sand and gravel layer was encountered beneath the fine sand and silt layer at the south side of the site and in relatively minor thicknesses at two other locations.

Glacial till and fine sand and silt constitute the lowest quality aquifers in the region, with yields of only 1-2 gallons per minute.

Bedrock underlying the site is from 35 to 55 feet below the ground surface. Wells tapping the bedrock aquifer in Oswego County have average depths of 85 to 90 feet, and typically produce yields of 3 gallons per minute.

Groundwater flow patterns clearly indicate that groundwater flow is toward Ox Creek.

A portion of the site is located within the 100 year floodplain, coinciding approximately with the 360-foot elevation contour.

SITE HISTORY

In early 1971, a permit application to landfill an area now referred to as the Clothier Disposal site was submitted by the site owner to the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH). Following an inspection by NYSDOH, the site was deemed unsuitable for the disposal of any solid waste materials, and a permit was denied on April 19, 1971. Written notice to the site owner at this time cautioned against landfill operations without a permit. In 1973, the Oswego County Health Department found drums of chemical waste from the Pollution Abatement Services, Inc. facility dumped on the Clothier property, and requested an investigation by NYSDEC. In November 1976, NYSDEC brought suit against the owner of the Clothier Disposal site for operating an illegal dump. In 1977, the owner made an apparent attempt to bury or cover the waste materials dumped on the site. In doing so, drums were broken open and drained. The owner was cited in December 1977, for failing to meet the conditions imposed by the previous year's suit. The case was dismissed when the State's attorney did not appear in court at the appointed time.

Between early 1978 and the spring of 1980, additional efforts were made by the owner to clean up the property. Again these efforts largely entailed burying or covering previously exposed wastes. However, in late 1982, additional dumping of roofing shingles and/or tar paper occurred. An undetermined number of drums were still piled on the site approximately 200 yards south of South Granby Road, east of Ox Creek and the adjacent wetland.

In June 1983, Engineering-Science, Inc. performed a Phase I Engineering Investigation and Evaluation of the Clothier Disposal site for NYSDEC for the purpose of computing a Hazard Ranking System (HRS) score needed to evaluate whether to place the site on the National Priorities List (NPL). In the Phase I report, an HRS score of 36.18 was presented, which was above the minimum score of 28.5 necessary for inclusion on the NPL. Further evaluation, in October 1984, resulted in the modification of the score to 34.48 when it was proposed by the U.S. Environmental Protection Agency (USEPA) for inclusion on the NPL.

By October 1984, the disposal of additional miscellaneous household waste had occurred, but there was no appreciable evidence that the drums had been further disturbed.

A cooperative agreement between NYSDEC and USEPA enabled NYSDEC to initiate and direct remedial investigation and feasibility study (RI/FS) activities at the site in 1985.

In August 1985, field work for the RI commenced at the site. The work was conducted by NYSDEC's contractor, URS Company, Inc. (URS), and several subcontractors. During the fall of 1985, while RI field activities were underway, a number of junked vehicles were disposed of on the site.

As part of the RI, approximately 2,200 drums on the Clothier Disposal site were staged and sampled; leaking or deteriorated drums were placed in overpacks. The samples were analyzed in the field as part of an initial waste characterization but did not entail identification of specific compounds. Concurrently with the RI activities, NYSDEC personnel sampled and analyzed six of the drums for specific compounds. Upon evaluating these data and other information, and considering the health risks associated with the drums, USEPA established a need to remove and dispose of them as an emergency removal action.

A number of potentially responsible parties (PRPs), operating under a May 8, 1986 Administrative Order on Consent, removed and disposed of about 1,858 drums from the site during the summer and fall of 1986. The remaining 271 drums were resampled by USEPA, and were restaged into separate areas according to their contents (i.e., PCBs, non-PCBs). Of these, 211 drums of flammable liquids and solids were disposed of by USEPA under emergency removal authorities in July 1987. The remaining 60 drums were removed from the site in July 1988 by USEPA and taken to an off-site facility for disposal. All known surface and subsurface drums, particularly those along the embankment slope, have been removed, although refuse and other miscellaneous debris are still present on-site. During the drum removal activities, visibly contaminated surficial soil and debris associated with the drums were excavated and staged in an area in the south central portion of the site. This accumulation (the "soil pile") was removed from the site by USEPA and taken to an off-site facility for disposal in July 1988.

A number of data quality problems complicated the completion of the RI/FS activities for the site. Groundwater, surface water, soil and sediment samples were collected at the site by URS in February 1986. Prior to laboratory analyses, these samples were held longer than the permitted holding times specified in the Quality Assurance Plan. As a result, the sample analyses were rejected, and resampling was conducted by URS, at its own expense, in July 1986. An RI/FS report was completed in June 1987. Following the public release of this report, it was determined that the sample results had not been validated by NYSDEC. Subsequently, the sample analyses discussed in the report were determined to be invalid by NYSDEC.

A third round of shallow soil and groundwater samples were collected by URS, at its own expense, in October 1987 and January 1988, respectively. In this round, the number of soil samples locations was increased significantly to better characterize the areal extent of soil contamination on-site. It was subsequently determined that the soils data did not allow full characterization of the depth of the contamination. As part of a supplemental RI/FS, USEPA's contractor, Ebasco Services, Inc. (Ebasco), conducted deep soil sampling in February 1988 for the purpose of determining the vertical extent of soil contamination.

In August 1988, URS' and Ebasco's RI/FS reports were released to the public.

The U.S. Fish and Wildlife Service (USFWS), by means of an interagency agreement with USEPA, performed surface water, sediment, and biological sampling in Ox Creek during June, July, September, and October 1987. The results of the analyses conducted on these samples are the subject of a USFWS report issued in August 1988.

Enforcement History

Notice letters were sent in March 1985 advising the Clothier Disposal site PRPs of USEPA's intent to fund an RI/FS at the site.

On March 19, 1986, EPA issued notice letters for the performance of removal activities at the site.

On May 8, 1986, EPA entered into an Administrative Order on Consent with those PRPs who elected to voluntarily conduct selected removal activities.

On August 12, 1986, EPA issued a Unilateral Administrative Order ("Unilateral AO"). The activities required by the Unilateral AO included the performance of the remaining removal activities at the site. Since the respondents did not comply with the Unilateral AO, USEPA completed the removal activities. USEPA intends to enforce the terms of the order against the non-compliers.

In June 1987, USEPA advised the PRPs of the availability of URS' RI/FS report.

On September 16, 1988, USEPA advised the PRPs of the availability of URS' and Ebasco's RI/FS reports.

USEPA anticipates sending notice letters shortly after execution of this ROD to initiate remedial design and remedial action negotiations.

COMMUNITY RELATIONS HISTORY

USEPA and NYSDEC has kept the local citizens and officials advised throughout the Superfund process. Several public meeting were held in Grandby to discuss site developments. A number of informal meetings were held with local citizen groups during the course of the RI to discuss its results.

In July 1987, a public meeting was held to solicit comments on and to discuss the findings of the RI/FS issued in June 1987. In October 1988, a public meeting was held to discuss and receive comments on the RI/FS issued in August 1988 and the Proposed Remedial Action Plan (PRAP). Questions raised at the public meeting, and letters received and their corresponding responses, are summarized in the attached Responsiveness Summary.

In response to a request from the public, the RI/FS public comment period was extended from three weeks to sixty days. The comment period ended on November 4, 1988.

SCOPE AND ROLE OF RESPONSE ACTION WITHIN SITE STRATEGY

This remedy considers the fact that the sources of the contamination, approximately 2200 leaking on-site drums, and that the majority of the contaminated surficial soil (about 300 cubic yards) have been removed from the site, leaving the site, currently, with only residual low-level soil contamination. The analytical results of the soil samples have confirmed the fact that only low-level contamination remains on-site.

The selected remedy reduces the already acceptable risk level to humans (primarily trespassers, since there are no residents currently on-site) by the placement of a one-foot cover of clean soil over contaminated areas, thereby reducing the threat of direct contact/ingestion of the low-level contaminated soil. (Sampling will be performed during the design phase to determine the extent of the areas of residual contamination requiring covering.) The remedy addresses the present threat to the environment (e.g., Ox Creek, the adjacent wetland, and neighboring properties) due to soil erosion and surface water runoff by regrading and revegetating the site (the regrading plan and type of vegetation will be detailed during the design phase and will be compatible with wildlife habitat), and by placing rip-rap, as needed, on the embankment sloping toward Ox Creek. (The extent of rip-rap will be determined during the design phase and will consider the impact on the wildlife habitat.) Institutional controls to prevent the utilization of the underlying groundwater (e.g., through the drilling of wells in the shallow aquifer), the future development of the site for residential use, or any use involving excavation of the site or significant disturbance of the soil cover will be implemented. Any institutional controls, including without limitation, deed restrictions or easements, shall be consistent with New York State law.

The selected source control remedy does not address the groundwater, although a number of federal and New York State groundwater organic and inorganic ARARs are marginally exceeded. Considering that the groundwater samples were noted as being turbid (which may have artificially inflated the level of contamination), and that the background wells were screened in different soil strata than those on-site, an additional round of groundwater samples were collected in December 1988. The results of these samples will be evaluated to determine whether a second operable unit to address groundwater contamination is needed. If it is determined that this subsequent investigation is necessary, an attempt would first be made to determine how the contaminants migrated to the wetland (e.g., via surface water runoff or the groundwater).

The USFWS' study found no evidence of either environmental damage in the area around the site or contamination of Ox Creek at levels likely to be associated with risks to wildlife. The USFWS' study did not include the adjacent 11-acre wetland. Therefore, the selected source control remedy also does not address the adjacent 11-acre wetland. Proceeding with the recommended source control remedy, however, will help minimize future migration of contaminants to the 11-acre wetland. If, based upon the results of surface water and sediment samples collected in December 1988, it is determined that there is a need to remediate the wetland, a subsequent operable unit will be undertaken.

A long-term monitoring program will be implemented at the completion of the remedial action to evaluate changes should they occur. The long-term monitoring program will consider the installation of additional wells, including bedrock wells. Based upon the results of the monitoring program, sampling of the residential wells and the deeper aquifer would be performed, if warranted. Construction and post-construction air monitoring will be performed. This may include, but is not limited to, pre-construction air monitoring and/or analyses to further delineate areas of the site requiring covering.

SUMMARY OF SITE CHARACTERISTICS

Soil

The primary sources of contamination at the Clothier Disposal site were the approximately 2200 drums of hazardous substances dumped on the site in the early to mid-1970s. Many of these drums leaked, were broken open, or were drained onto the ground. All of the drums have now been removed from the site. During the repacking and staging of the drums, visibly contaminated surface soil was excavated and consolidated to form a soil pile. This soil pile has also been removed from the site.

Soil contamination characterization is based upon 36 soil boring/sampling locations collected by URS and Ebasco in October 1987, January 1988, and February 1988. These samples were analyzed for the full range of compounds specified in the target compound list (TCL).

The only source material remaining at the site is residual low-level contaminated soil in the areas where drums were disposed. Six drum pile/disposal areas were identified on the site. Other source areas include the former lagoon and drainage pathways leading from the site into the wetland.

Figure 3 illustrates the waste disposal areas on-site, and Figure 4 shows the principal area of soil contamination.

Drum Pile No. 1

At Drum Pile No. 1, TCL volatile organic contamination in the soil extends to a depth of at least 20 feet. The maximum concentration of total volatile organic (TVO) was 100,162 ug/kg, detected in the 3-5 feet sample at location 16E (see Figure 3). The primary constituent was xylene (100,000 ug/kg).

TCL semi-volatile organic contamination also extends to a depth of at least 20 feet. The maximum concentration of total TCL semi-volatiles was 8,682 ug/kg, found in the 3-5 feet sample at location 16E. Primary semi-volatile constituents include phenol (1,300 ug/kg), naphthalene (3200 ug/kg), and di-n-butyl phthalate (1500 ug/kg). Carcinogenic Polynuclear Aromatic Hydrocarbons (CPAHs) were also detected at concentrations ranging from 420 to 580 ug/kg. The maximum concentration of PCB Aroclor 1242 was 2,700 ug/kg, detected in the 13-15 feet samples at location 16E.

Drum Pile No. 2

At this location, the deepest volatile organic contamination was detected in the 8-10 feet sample at location 11E (see Figure 3). The maximum TVO concentration was 174 ug/kg, detected in the 3-5 feet sample at location 10. Primary volatile contaminants were acetone and methylene chloride at maximum concentrations of 160 and 31 ug/kg, respectively.

The deepest semi-volatile contamination was also found in the 8-10 foot sample at location 11E. The maximum concentration was 26,660 ug/kg (total semi-volatiles), detected in the 3-5 feet sample at location 11E. Primary constituents include phenol (12,000 ug/kg), 4-methylphenol (2,700 ug/kg), 2,4-dimethylphenol (2,300 ug/kg), and bis (2-ethylhexyl) phthalate (8,000 ug/kg). CPAHs were detected at a concentration of 541 ug/kg in the 3-5 feet sample at location 11.

PCB contamination was detected in one sample, in the 3-5 feet interval at location 11E. A concentration of 720 ug/kg of Aroclor 1242 was reported.

Drum Disposal Site No. 2

At Drum Disposal Site No. 2, volatile organic contamination extends to a depth of at least 10 feet. The maximum concentration of total volatiles was 170 ug/kg (acetone), detected in the 3-5 feet samples at location 13 (see Figure 3).

Semi-volatile organic contamination also extends to a depth of at least 10 feet. The maximum concentration of total semi-volatiles was 6,000 ug/kg, detected in the 3-5 feet sample at location 13. Principal semi-volatile contaminants at 3-5 feet were bis (2-ethylhexyl) phthalate (5,700 ug/kg) and phenol. CPAHs at a concentration of 880 ug/kg were detected at location 15 (3-5 feet sample).

PCB contamination was detected in one soil sample only. The 0-2 feet sample at location 13 contained 120 ug/kg of Aroclor 1242.

Drum Pile No. 3

At this location, volatile organic contamination extends to a depth of at least 10 feet. The maximum TVO concentration was 510 ug/kg, detected in the 3-5 feet sample at location 9 (see Figure 3). The primary constituents were xylene (240 ug/kg), ethylbenzene (82 ug/kg at 0-2 feet), acetone (110 ug/kg at 3-5 feet) and methylene chloride (160 ug/kg at 0-2 feet).

Semi-volatile organic contamination extends to a depth of at least 15 feet. The maximum concentration of total semi-volatiles was 7,170 ug/kg, detected in the 0-2 feet sample at location 8. Principal semi-volatile contaminants were N-nitrosodiphenylamine (5,400 ug/kg) and bis (2-ethylhexyl) phthalate (780 ug/kg). CPAHs were detected at nearby location 7E, in the 13-15 feet sample at a concentration of 1,330 ug/kg.

PCB contamination was detected in only one soil sample, the 8-10 feet samples at location 9E. The concentration of Aroclor 1242 was 360 ug/kg.

Drum Pile No. 4

Volatile organics were not detected at this location. Semi-volatiles were detected in the 0-2 feet sample only, at a concentration of 360 ug/kg. The two semi-volatile contaminants detected were phenol (130 ug/kg) and bis (2-ethylhexyl) phthalate (230 ug/kg). PCB Aroclor 1242 were also detected in the 0-2 feet sample at a concentration of 240 ug/kg. PCBs were not detected in the 3-5 feet sample. CPAHs were not detected in this area.

Former Lagoon

An area designated as the Former Lagoon is located near Drum Pile No. 4 in the southern portion of the site (see Figure 3).

Both volatiles and PCBs were below detection limits in the 0-2 and 3-5 feet samples at location 5. Semi-volatiles were detected in the 0-2 feet sample only. A concentration of 590 ug/kg total semi-volatiles was reported. Phenol (360 ug/kg) and bis (2-ethylhexyl) phthalate (230 ug/kg) were the only two semi-volatile contaminants detected.

Drum Disposal Site No. 1

Both volatiles and PCBs were below detection limits in the 0-2 and 3-5 feet samples from location 18. A concentration of 730 ug/kg total semi-volatiles was detected in the 0-2 feet sample. The semi-volatile PAH contaminants fluroanthene and pyrene were detected at concentrations of 290 ug/kg and 220 ug/kg, respectively. CPAHs were detected at a concentration of 220 ug/kg. Semi-volatiles were not detected in the 3-5 feet sample.

Other Areas

In addition to those areas associated with actual drum disposal or the removal activities, contaminated soil was found along drainage routes leading from the site to the wetland. Two areas were found to contain relatively high concentrations:

- Location 24E (receives drainage from the Drum Pile No. 1 area): Total semi-volatile organic concentrations ranged from 7,160 to 19,049 ug/kg. CPAH concentrations were below detection limits. PCB concentrations ranged from 400 to 2,500 ug/kg.

- Locations 14 and 15 (at the mouth of the swale that drains much of the central portion of the site): Maximum total semi-volatile concentrations range from 1,288 to 1,780 ug/kg. CPAH concentrations were 880 ug/kg in the 0-2 feet sample at location 15, below detection limits in other samples. PCBs were also below detection limits. The highest concentrations of barium (342 mg/kg) and chromium (35 mg/kg) were detected in 3-5 feet at location 14.

Groundwater

Groundwater quality samples were collected in January 1988 from the 10 monitor wells installed on or adjacent to the site, and were subjected to complete TCL analyses. The following conclusions were drawn from these data:

- Volatile organics were the most prevalent contaminant and were detected in 9 of 10 wells; semi-volatiles were detected in 3 wells. The most common organic contaminants were methylene chloride and bis (2-ethylhexyl) phthalate. Both of these contaminants are common laboratory contaminants.

- Volatile organic chemicals of concern were identified as TCE and PCE; organic contamination was restricted largely to the shallow wells completed in the fine sand and silt unit. Wells in the vicinity of Drum Piles Nos. 1 and 2 and at the mouth of the swale displayed the maximum concentrations and/or the highest number of contaminants detected in the wells. TCE concentrations were 1.2 ug/L (CBW-3), 1.5 ug/L (CBW-8) and 18 ug/L (CBW-4S). PCE was detected in only two wells, CBW-3 and CBW-8, at concentrations of 2.3 and 24 ug/L, respectively.

- Inorganic contamination in site monitoring wells included cadmium, chromium, and manganese at concentrations above those detected in the off-site wells CBW-1S and CBW-1D. These wells are completed in the sand and gravel unit and may not actually represent true background at the site. Also, it is believed that the presence of turbidity in the groundwater samples may have artificially inflated the level of contamination present. A second round of groundwater samples were collected in December 1988 to confirm the results of the first round.

Surface Water and Sediment

Sampling was conducted by the USFWS to determine whether hazardous substances from the site had contaminated Ox Creek. Water, sediment, fish, small mammals, and vegetation were collected and submitted for residue analysis to assess the impact of contamination in the Ox Creek ecosystem. The study found no evidence of either current environmental damage in the area around the site or contamination of Ox Creek at levels likely to be associated with risks to wildlife.

The USFWS' study did not include an 11-acre wetland located adjacent to the site. This area was sampled by Ebasco in December 1988.

SUMMARY OF SITE RISKS

For the purpose of risk assessment, soil samples at the Clothier Disposal site were arranged into three groups. The surface soil group includes all samples at a depth from 0-2 feet as well as the six composite samples collected. A second grouping includes unsaturated soil samples, (i.e., all soil samples above the water table on the site). The third group, the saturated soil samples group, consists of soil samples from below the water table.

Chemicals were determined to be site-related if they were present in environmental media at above-background concentrations and/or could be related to past operations at the site. Chemicals which were detected in less than 5 percent of the samples collected for a specific medium were not considered to be site-related chemicals of concern unless they were known to be present in the original waste based on historical site information.

To estimate background at the site, the concentration of inorganic chemicals in site-related samples were compared to ranges of concentrations from both upstate New York and from the eastern United States B horizon soil ranges. Contaminant concentrations present within either of these background ranges, and usually both ranges, were considered to be present at naturally-occurring levels.

Surface Soils

Numerous organic chemicals were detected in the 28 surface soil samples collected from the site. Seven chemicals were detected in less than 5 percent of the samples. One of these infrequently detected chemicals, acenaphthene was evaluated as components of the non-carcinogenic PAH group. Tetrachloroethene and toluene were, likewise, detected only once. Nevertheless, these two volatile organic compounds were found in groundwater samples, indicating site-relatedness and were, therefore, included in the evaluation.

Inorganic chemicals of concern are silver, cadmium, selenium, and thallium.

Unsaturated Soils

Of the organic chemicals found in the unsaturated soil samples, 17 chemicals were detected in less than five percent of the noncarcinogenic PAHs. Although anthracene was detected in only one of the 60 samples, it will be considered further as a component of the noncarcinogenic PAHs. Tetrachloroethene, trans 1,2- dichloroethane, and 1,1,1,-trichloroethane were likewise detected in less than five percent of the samples. These chemicals, however, were detected in groundwater samples, indicating site-relatedness and, therefore, were included in the evaluation.

Identical inorganic chemicals of concern, namely, silver, cadmium, selenium, and thallium were found in the unsaturated soils as in the surface soils.

Saturated Soils

Because no direct exposure scenarios with these saturated soils exist, no chemical of concern was selected for quantification of risk.

Groundwater

There are 10 monitoring wells at the Clothier Disposal site. Groundwater standards were reviewed to ensure that chemicals that exceed these standards were not being eliminated from further consideration in the risk assessment based on background considerations.

All organic chemicals detected in groundwater samples, except methylene chloride, were evaluated in this assessment. Methylene chloride was found in low concentrations and it is frequently a laboratory contaminant.

Site-related inorganic chemicals of concern are cadmium, chromium and manganese.

All chemicals of concern are summarized by area and medium in Table 1.

Air

Surface soils at the site are not completely covered by vegetation. Wind entrainment of dust particles is a potential pathway for inhalation.

Exposure Assessment Summary

Exposure scenarios are developed for both current-use conditions and potential future-use conditions. The future-use scenario addresses plausible development uses of the land and considers what risk may be associated with that use of the land assuming no cleanup of site contamination.

For each exposure scenario, two exposure cases, an average and a maximum case, were developed.

Exposure Under Current Land-Use Scenarios

Soil Exposure Currently, the Clothier Disposal site is used for disposal of debris, namely, abandoned vehicles. The site is surrounded by farmland and the nearest residences are approximately 3/4 to one mile away. Approximately 160 people are reported to live within one mile radius.

However, the site is not adequately fenced and provides no barrier to either the present owner or to trespassers. Therefore, exposure to the current owner or to trespassers is possible, and was considered in this assessment.

Air Exposure Surface soils at the site are not completely covered by vegetation. Therefore, wind entrainment of dust particles is a potential pathway for inhalation of contaminants.

Groundwater Exposure The shallow aquifer is not currently used in the area as a source of water for any type of use. Nearby residents to the south, east, and west of the site are reported to use private groundwater wells as a source of drinking water, but these wells are in an aquifer other than the aquifer where contamination was found at the site. Groundwater from the site flows to the west, towards Ox Creek. Based on the direction of groundwater flow, wells to the east and south are upgradient. Furthermore, discharge to the creek is likely to intercept contamination before it can reach wells west of the creek. This will be confirmed by long-term monitoring.

Consequently, no groundwater exposure pathways are believed to exist under the current-use scenario.

Surface Water Exposures Surface water may be contaminated by discharge of contaminated groundwater from the site and/or overland flow of contaminants from the site. These contaminants can migrate into the wetland and into Ox Creek, which is used for fishing. The Oswego River, which the creek joins about 2.5 miles downstream of the site, is the source of drinking water for the Town of Fulton. The USFWS studied the effects of contamination at the Clothier Disposal site on the natural resources of the area. The USFWS study included the sampling of surface water in Ox Creek and determined that contaminant levels were not above background in Ox Creek. The 11-acre wetland located adjacent to the site was not investigated by the USFWS. This area was sampled by USEPA in December 1988.

The primary effects of stream contamination, if it occurs, are likely to be environmental, not human health. This is because the stream is not used as a drinking water source, and because dilution by several orders of magnitude occurs between the creek and the Oswego River, which feeds wells used by the Town of Fulton for water supply. Therefore, surface water exposures will be considered in the environmental assessment only.

Exposure Under Future-Use Scenario

Because the site is in a rural agricultural area, the most likely future-use scenario that might be associated with significant health risk is continued use by the current owner for the disposal of debris, including abandoned vehicles, or the building of homes on the site.

Soil Exposure To estimate risks that might be associated with direct contact with soil, current concentrations of chemicals of concern in soil were assumed to remain in the future.

Air exposure Air exposures similar to those considered in the current land-use scenario are possible if the land is used for residences. In addition, long-term exposure to vapors accumulating in the basement is possible if residences are built on the site.

Groundwater Exposures The contaminated groundwater aquifer has poor flow characteristics relative to other aquifers in the area, making it unlikely that it would be used as a drinking water source. However, since it is conceivable that it could be used as a water supply, the possible future use of the contaminated groundwater is considered.

Table 2 lists ARARs for the chemicals of concern in groundwater at the Clothier Disposal site, and the geometric mean and maximum concentration values currently detected in the site's groundwater. Geometric mean concentration values never exceed federal ARARs for those chemicals with ARARs.

Summary of Risk Characterization

Current-use scenarios for the plausible maximum case were not associated with any excess cancer risks greater than the 2x10E-6 for direct contact to adult trespassers. Future lifetime residential use of the site for the plausible maximum case is associated with a 3x10E-5 cancer risk from direct lifetime contact with soils at the site. These excess cancer risks are primarily due to Aroclor 1242 and carcinogenic PAHs.

While some of the maximum concentrations of the contaminants marginally exceed ARARs, the geometric mean values never exceed ARARs. Excess cancer risk associated with lifetime use of groundwater as a source of drinking water is 7x10E-6 for the average and 5x10E-5 for the plausible maximum case, due primarily to tetrachloroethene and trichloroethene. This drinking water scenario is also associated with a total hazard index of 5 for the average exposure case and 10 for the plausible maximum case, due primarily to cadmium.

Cleanup Levels to Reduce Risks

In evaluating remedial alternatives, the issue of the extent to which soil would need to be excavated and disposed of or treated to reduce risks to specific target levels is crucial.

Table 3 summarizes the soil cleanup levels required to achieve the various lifetime cancer risk levels; current-use scenario.

Table 4 summarizes the soil cleanup levels required to achieve the various lifetime cancer risk levels; future-use scenario.

Determination of Contamination Area and Volumes

There are no directly applicable cleanup regulations pertaining to the levels of PCBs and CPAHs found in soil. A health-based risk assessment must be utilized to determine the cleanup levels.

Tables 3 and 4 include the health-based cleanup levels for CPAHs. However, a comparison to background levels should be made for CPAHs. The health-based cleanup levels are in some cases much lower than background. As a result, it would be realistic to set the soil cleanup levels for these compounds at background. For the Clothier Disposal site, background would be between 20 ppb to 260 ppb.

It should be noted that for the CPAHs, the contract-required detection limits (CRDLs) required under the regular analytical services of the USEPA Contact Laboratory Program for the analysis of samples from Superfund sites are 330 ppb for each CPAH. At this level, the plausible worst-case risk would be about 2x10E-7 for the current use scenario (direct contact) or 3x10E-6 for the future-use scenario. These risk levels could be considered protective of human health and the environment. Therefore, the clean-up level of CPAHs could be set at 330 ppb. By comparing this cleanup level with CPAH-contaminated sample points, five areas have been identified as contaminated above this level. These areas, as depicted in Figure 5, will be considered for remediation.

The Toxic Substances Control Act (TSCA) PCB Spill Cleanup Policy (40 C.F.R., Part 761, Subpart G) should be considered in the cleanup of PCBs in soil. This policy sets a PCB cleanup level of 10 ppm. The placement of a one-foot soil cover over the PCB-contaminated soil would be consistent with the TSCA PCB Spill Cleanup Policy.

As depicted in Figure 5, the highest PCB contamination on-site that poses a potential risk due to direct contact is 2.5 ppm at surface sample point 24E. Accordingly, there would be no requirement for remediation if the TSCA PCB spill cleanup standard of 10 ppm is adopted. The corresponding plausible worst-case lifetime cancer risks, based on the health-based risk assessment, for direct contact and incidental ingestion of on-site PCB contaminated soil are 1x10E-5 for adults trespassing and 2x10E-5 for adults residing on the site.

Since remediation would not be required based upon TSCA, a PCB "cleanup level" of 1 ppm has been assumed. Cleaning PCBs in soil down to 1 ppm represents a plausible worst-case risk from direct contact of 7x10E-6 for the future-use scenario and below 4x10E-7 for the current-use scenario.

By comparing this 1 ppm PCB cleanup level to the RI results, two areas, sample points 16E and 24E, with PCB concentrations above this "cleanup level" are identified. One area (sample point 16E) contains 2.7 ppm of PCBs at 13-15 feet below the surface. It is unlikely that contaminants at such depth would pose significant direct contact risk to any unintentional intruder.

The remaining area has PCBs at the 0-5 feet level. Therefore, cleanup down to 5 feet below the surface of soil is considered responsive to the remedial action objectives and protective of human health and the environment. The five contaminated areas identified above for both PCBs and CPAHs, are listed below:

AREA	PCBs ppm	CPAHs ppm
24E	2.5	0
11	0	0.5
15	0	0.9
16	0	0.6
17	0.2	0.6

In order to derive a reasonable volume of soil for evaluating various remedial alternatives, a circle of 60 feet in diameter encircling each sample point that residual contamination was detected is considered large enough to adequately cover the potentially contaminated area.

Based on the criteria discussed above, a volume of approximately 2500 cubic yards of soil is calculated. This volume will be used to formulate and prepare cost estimates for the alternatives.

DOCUMENTATION OF SIGNIFICANT CHANGES

There are no significant changes from the preferred alternative presented in the PRAP.

DESCRIPTION OF ALTERNATIVES

Approximately 2,200 drums and approximately 300 cubic yards of highly contaminated surficial soil have been removed from the site. The levels of soil contamination on-site present risk levels which are in an acceptable range. The alternatives evaluated below address the residual soil contamination currently on-site.

A total of ten alternatives were considered for remediating the site. They are as follows:

1. No Action
2. Limited Action
3. Excavation and off-site Disposal of Residual Contamination
4. Installation of a Soil Cap
5. On-site Thermal Oxidation of Residual Contamination
6. On-site Solidification and Stabilization of Residual

Contamination

7. Installation of a Resource Conservation and Recovery Act (RCRA) cap and leachate collection with off-site leachate treatment
8. Installation of a RCRA cap and leachate collection with on-site leachate treatment
9. Bioreclamation
10. Vitrification

Alternative 7, the installation of a RCRA cap and leachate collection with off-site leachate treatment, and Alternative 8, the same as Alternative 7 but with on-site leachate treatment, were eliminated in the initial screening. This was because the ROD does not address the groundwater, and because leachate collection is inappropriate for the site due to the low hydraulic conductivity of the clayey silt soil.

The poor hydraulic conductivity of the clayey silt soil present on-site will not allow water, microorganisms, nutrients, oxygen, or mobilized contaminants to be moved with ease. Therefore, Alternative 9, bioreclamation, was eliminated from further consideration.

Alternative 10, vitrification, was also eliminated during the initial screening, since the moisture content of the on-site soil is reported to contain from 23-28% water. The vitrification process is reported to be applicable to soils with a maximum moisture content of only 10%.

Of the ten remedial alternatives, six were retained for detailed analysis.

Alternative 1 - No Action

This alternative is included to serve as a "baseline" case against which the other alternatives are evaluated. Under this alternative, no remedial action would be taken.

As required by SARA, a program of periodic monitoring would be implemented for 30 years to evaluate changes in site conditions with time. Monitoring would consist of semi-annual sampling of the ten existing monitoring wells. In addition, four surface soil samples would be collected. Two of the soil samples would be collected from the wetlands. Water samples would be analyzed for TCL of chemicals while the soil samples would be analyzed for PCBs and CPAHs. Air monitoring would also be performed. At least annual monitoring would be conducted for the first 5 years. The long-term monitoring program would consider the installation of additional wells, including bedrock wells. Based upon the results of the monitoring program sampling of the residential wells and the deeper aquifer would be performed, if warranted.

Alternative 2 - Limited Action

Under this alternative, actions would be limited to regrading the site by placing approximately one foot of clean fill, brought to the site from an off-site source, over contaminated areas, supplemental soil sampling to define the areas of contamination, regrading and revegetating portions of the site to limit surface runoff towards Ox Creek and neighboring properties, and installing rip-rap, as needed, on the embankment sloping toward Ox Creek and its wetland to limit surface soil erosion. To the extent possible, institutional controls would be implemented to prevent the utilization of the underlying groundwater, the future development of the site for residential use, or any use involving excavation of the site or significant disturbance of the soil cover. Any institutional controls, including, without limitation, deed restrictions or easements, would be consistent with New York State law.

A program of long-term monitoring (30 years) would be undertaken to evaluate changes in the ground- water, soil, and air with time. In addition, sediment and surface water samples would be collected from the adjacent wetland to monitor its condition. At least annual monitoring would be conducted for the first 5 years. The long-term monitoring program would consider the installation of additional wells, including bedrock wells. Based upon the results of the monitoring program, sampling of the residential wells in areas neighboring the site, and the deeper aquifer would be performed, if warranted. Construction and post-construction air monitoring would be performed. This would include, but not be limited to, pre-construction air monitoring and/or analyses to further delineate areas of the site requiring covering.

Alternative 3 - Excavation and Off-Site Disposal

This alternative involves excavating 2500 cubic yards of residual contaminated soil, placing the excavated material in trucks and hauling the material off-site to a RCRA hazardous waste landfill.

Upon completion of the excavation, clean soil would be backfilled and the site would be regraded to promote drainage. The site would be revegetated to prevent soil erosion.

Long-term monitoring would not be included with this alternative. A confirmatory monitoring program, however, would be undertaken to evaluate the effectiveness of the remedy.

Alternative 4 - Installation of Soil Cap

The major component of this alternative consists of consolidating residual contaminated soil into a soil pile. Then an approximately one-acre soil cap would be constructed of two feet of top soil overlying one foot of sand (for drainage). The cap would be graded vegetated, and rip-rap would be installed, as needed, along the embankment to minimize erosion.

Long-term monitoring would be included with this alternative.

Alternative 5 - On-Site Thermal Oxidation

This alternative consists of excavating 2500 cubic yards of residual contaminated soil, preprocessing the soil to meet the thermal oxidation feed requirements, and then feeding the soil to a mobile thermal treatment unit brought to the site. The treatment unit would be equipped with an afterburner to destroy organics vaporized from the soil, and a scrubber to wash and cool the combustion air before being discharged to the atmosphere. The bottom ash and fly ash from the incinerator would be tested to assure that they meet the appropriate leaching standard and, finally, when judged acceptable, used as backfill in the excavated areas.

Long-term monitoring would not be included with this alternative. A confirmatory monitoring program, however, would be undertaken to evaluate the effectiveness of the remedy.

Alternative 6 - On-Site Solidification and Stabilization

This alternative consists of excavating 2500 cubic yards of residual contaminated soil, mixing the soil with chemical reactive additives and a cementitious grout compound, and permitting the mixture to solidify. This would effectively seal the waste in a hard monolithic matrix. The solidified matrix would be disposed of on-site below the freeze-thaw line, and would be covered with clean soil to avoid direct contact.

The blending and mixing of the soil with the additives and grouting materials would be performed in an on-site mobile processing unit.

Long-term monitoring would be included with this alternative.

SUMMARY OF COMPARATIVE ANALYSIS OF ALTERNATIVES

The remedial action alternatives described above were evaluated in accordance with the requirements of the NCP and CERCLA. Nine criteria relating directly to the factors mandated in Section 121 of CERCLA including subsection 121 (b)(1)(A-G) and USEPA's Interim Guidance on Selection of Remedy (December 24, 1986 and July 24, 1987) were utilized for this evaluation, and are as follows:

- Short-term effectiveness
- Long-term effectiveness and permanence
- Reduction of toxicity, mobility, or volume
- Implementability
- Cost
- Compliance with applicable or relevant and appropriate requirements (ARARs)
- Protection of human health and the environment
- State acceptance
- Community acceptance

Short-Term Effectiveness

With the completion of the removal actions, which resulted in the removal of all the drums and the majority of the visibly-contaminated surface soils, the on-site risks have been reduced to a range generally considered protective of human health. Since there are no residents on-site, current risks are related to trespassers and the current owner.

The risk assessment indicated that direct contact with the residually contaminated soil on-site is the most important route of human exposure. The plausible maximum lifetime cancer risk estimates for direct contact and ingestion of on-site soils by adults trespassing on the site was 2x10E-6. With this in mind, all six alternatives would be an effective method of risk control. Alternative 1, No Action, would offer the least degree of effectiveness, but would still achieve protection of public health and the environment.

Relative risk to on-site workers is dependent on the volume of material handled. Since Alternative 2 involves limited on-site remedial action, this concern would be minimal. For Alternatives 3 and 4, which require excavation, the potential risks are those associated with dermal contact with the contamination media. Alternatives 5 and 6 involve treatment in addition to excavation. The risk associated with these alternatives would be potentially greater than the previous alternatives because of the additional handling of the materials. The risk associated with these alternatives would be significantly reduced, though, through the use of proper personnel protection equipment.

The time required to implement each alternative is between one and two years. Except for Alternative 1, the alternative requiring the least amount of time to implement would be Alternative 2.

Long-Term Effectiveness and Permanence

The drum and contaminated soil removal actions described above offer a high degree of permanence under current conditions.

The one-foot soil cover of Alternative 2 would mitigate against direct contact or ingestion of the residually contaminated media. Although this alternative is less permanent than the other alternatives, since the residual contamination that is present on-site is below health-based levels, Alternative 2 still affords a high degree of effectiveness and permanence.

Alternatives 3 and 5 would permanently remove the contaminated media from the site.

Alternative 4, the installation of a soil cap, although less permanent than other alternatives, effectively mitigates the risk associated by direct contact with the contaminated media. The long-term effectiveness is dependent on maintenance of the cover and the adherence to imposed land-use restrictions. The additional cost associated with this alternative as compared to Limited Action provides somewhat greater permanence due to greater stability of a thicker covering of soil. Risk levels of the two alternatives are the same.

Alternative 6, which is a highly effective alternative, offers a permanent solution to the contaminant problem by immobilizing the contaminants in the soil matrix. Because the matrix would be redeposited on-site under this alternative, long-term effectiveness is dependent on inspection of the site and annual monitoring of the affected media.

Reduction in Toxicity, Mobility or Volume (TMV)

Alternatives 1 and 2 provide no reduction in the current residual contaminant toxicity, or volume. Alternative 2 would reduce the residual contaminant mobility. The current risk associated with this site is within the range recommended by USEPA.

Alternative 3, excavation and off-site disposal, would effectively reduce the contaminant TMV from current levels on-site. Alternative 3, however, achieves this goal by moving the contaminated media to another location (off-site landfill) where its mobility is reduced but its toxicity and volume are retained.

Alternative 5, on-site thermal treatment, would effectively reduce on-site contamination TMV.

Alternative 4 would reduce the contaminant mobility somewhat through the use of a soil cover, but toxicity and volume would remain the same.

Alternative 6 would significantly reduce the contaminant toxicity and mobility. The solidified soil volume would probably increase.

Implementability

All components of Alternatives 1, 2, and 3, and most components of Alternatives 4 and 5, utilize relatively common construction equipment and materials. Little construction difficulty should occur with any of the alternatives.

All of the technologies under consideration are proven and demonstrated reliable in achieving the specified process efficiencies and performance goals. Under Alternative 3, finding an off-site disposal facility that is in compliance with RCRA may be difficult. Solidification, while not fully demonstrated, has undergone extensive pilot testing, and would likely achieve the specified process efficiency.

Cost

The Limited Action alternative is the least costly alternative after the no-action alternative, with a total present worth of $500,000. The present worth costs of all alternatives are shown in Table 5.

Alternative 3, excavation and off-site disposal of contaminated soil, has a present worth of $1,633,000. The additional cost of this alternative to that of the limited action alternative reduces the already acceptable level of on-site risk and increases the short-term risk due to excavation and transportation activities.

Alternative 4, the installation of a soil cap, has a present worth of $666,000.

Alternative 5, on-site thermal incineration, is the most costly alternative with a present worth value of $3,062,000.

Alternative 6, on-site solidification, has a present worth of $1,691,000, about the same as the cost of Alternative 3, excavation and off-site disposal. However, present risk levels are already considered to be in an acceptable range so that the additional cost for treatment does not bring any substantial lowering of the risk level.

Compliance with ARARs

All technologies proposed for use in Alternatives 2 through 6 can be designed and implemented to satisfy all action- and location-specific ARARs. Chemical-specific ARARs were used to define cleanup or remediation levels.

There are no federal or New York State ARARs for soil. Federal and New York State ARARs for groundwater are marginally exceeded. However, considering that there are no residents or wells currently on-site and that the shallow aquifer is a low yielding aquifer and thus is unlikely to be used as a water supply. Institutional controls would be employed for the alternatives which allow residual contamination to remain on-site, to prevent the utilization of the underlying aquifer (e.g., through the drilling of wells in the shallow aquifer). As noted previously, this ROD does not address groundwater contamination.

The implementation of the Limited Action alternative would require compliance with action and location-specific ARARs, i.e., Occupational, Safety and Health Regulations, and attention to floodplain and wetland regulations, since the site is included in a floodplain and is adjacent to a designated wetland.

Overall Protection of Human Health and the Environment

Alternative 1, No Action, provides no reduction in risk to humans and the environment. However, present risk levels are considered to be in an acceptable range.

Alternative 2, Limited Action, provides additional protection over No Action by covering the existing areas of low-level contamination with a 1-foot covering and restricting future development of the site.

All alternatives are protective of human health and the environment. Alternatives 3, 4, 5, and 6 all achieve the same degree of health-based risk level. However, Alternatives 5 and 6 have a higher degree of confidence because treatment processes are considered irreversible.

STATE ACCEPTANCE

NYSDEC concurs with EPA's selection of Alternative 2-Limited Action.

COMMUNITY ACCEPTANCE

The community has expressed concern over the use of incineration, which was identified as the preferred remedy previously (but not in the PRAP). However, the analytical data upon which the remedy selection was based was later determined to be invalid. Incineration is no longer considered appropriate for this site. The community also expressed a preference for bioreclamation in 1987. This alternative has been ruled as being technically infeasible for this site.

The community has expressed two principal concerns, namely:

1) Delaying the signing of the ROD until the Fulton Safe Drinking Water Action Committee for Environmental Concerns, Inc. (FSDWAC), receives a Technical Assistance Grant (TAG) from USEPA and has the opportunity to have a technical assistant review and comment on the RI/FS documents; and

2) Investigating the adjacent 11 acre area of the Ox Creek wetland, which was only recently sampled, before signing a ROD for the source control remedy.

These concerns are addressed as follows:

1) In response to a request from representatives of FSDWAC, the RI/FS comment period was extended from twenty-one days to sixty days to allow sufficient time to perform a technical review of the RI/FS and the PRAP.

During the public comment period, a public meeting was held to explain the results of the study, to discuss the preferred remedy, and to solicit public comments and concerns.

During the course of the project, USEPA and NYSDEC have conducted a significant public outreach program. As part of this program, a number of meetings and informal discussions with the public and FSDWAC have been conducted to discuss technical issues associated with the Clothier Disposal site.

USEPA is committed to citizen involvement in the Superfund process. USEPA is equally committed to remediating sites as expeditiously as possible. To delay the selection of the remedy for the site until after a TAG has been awarded, a technical advisor has been selected, and a technical review of the documentation by the technical advisor has been completed would seriously delay remediating the residual contamination at this site. Instead, USEPA plans to review FSDWAC's application and award a TAG so that technical assistance may be available to FSDWAC during the design and construction of the remedy that EPA selects.

2) The proposed remedy will address residual on-site contamination, and will virtually eliminate the potential for any migration of residual contaminants from the Clothier Disposal site to the adjacent wetland. Therefore, USEPA does not believe that even if the samples from the wetland show contamination, it will be necessary to modify the remedy proposed for the site. However, if the sample results show that contamination is present in concentrations that will make remediation of the wetland necessary, this area will be addressed separately.

THE SELECTED REMEDY

The removal actions undertaken by the PRPs and USEPA have lead to the removal of approximately 2000 drums and the associated visibly contaminated soil. As a result, only residual soil contamination remains on-site. The results of a risk assessment performed for the site lead to the conclusion that the residual soil contamination currently on-site poses an acceptable risk to human health.

The selected remedy for the site is Alternative 2, Limited Action.

This remedy addresses the principal threat at the site, namely direct contact and ingestion of low level contaminated soil by trespassers, by covering the contaminated areas with one foot of clean soil.

The USFWS' study found no evidence of either environmental damage in the area around the site and Ox Creek at levels likely to be associated with risks to wildlife. The USFWS' study did not, however, include the adjacent 11-acre wetland. Therefore, this source control remedy does not address the adjacent 11-acre wetland. If, based upon the results of surface water and sediment samples collected in December 1988 it is determined that there is a need to remediate the wetland, a subsequent operable unit will be undertaken.

The remedy also does not address the groundwater. Although a number of federal and state ARARs were marginally exceeded, it is believed that the presence of turbidity in the groundwater samples may have artificially inflated the level of contamination actually present in the groundwater. The groundwater was resampled in December 1988. If based upon the results of these samples, it is determined that there is a need to remediate the groundwater, a subsequent operable unit will be undertaken.

The major components of the selected remedy are as follows:

- Placement of a one-foot clean soil cover, brought from an off-site source, over the contamination areas. Sampling will be performed during the design phase to determine the extent of the areas of residual contamination requiring covering.

- Regrading and revegetating the site to prevent soil erosion and minimize surface water runoff towards neighboring properties, Ox Creek, and the adjacent wetland. The regrading plan and types of vegetation will be determined during the design phase, and will be compatible with the wildlife habitat.

- Installing rip-rap, as needed, on the embankment sloping towards Ox Creek to prevent soil erosion. The extent of the rip-rap will be determined during the design phase, and will consider the impact on the wildlife habitat.

- Performing long-term groundwater, soil and Ox Creek sediment and surface water monitoring to evaluate any changes should they occur. The long-term monitoring program will consider the installation of additional wells including bedrock wells. Based upon the results of the monitoring program, sampling of the residential wells in areas neighboring the site, and the deeper aquifer would be performed, if warranted.

- Performing construction and post-construction air monitoring. This may also include, but it is not limited to, baseline preconstruction air monitoring and/or analyses to further delineate areas of the site requiring covering.

- Applying, to the extent possible, institutional controls to prevent the utilization of the underlying groundwater (e.g., through the drilling of wells in the shallow aquifer), the future development of the site for residential use, or any use involving excavation at the site or significant disturbance of the soil cover. Any institutional controls, including, without limitation, deed restrictions or easements, shall be consistent with New York State law.

STATUTORY DETERMINATIONS

Section 121 of CERCLA mandates that USEPA select a remedial action that is protective of human health and the environment, attains ARARs, is cost-effective, and utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. Remedial actions in which treatment which permanently and significantly reduces the volume, toxicity or mobility of a hazardous substance as a principal element are to be preferred over remedial actions not involving such treatment.

Based upon the analyses presented herein the following conclusions are reached:

- Overall Protection of Public Health and the Environment

  With the completion of the removal actions, on-site risks to trespassers and the current owner have been reduced to a range considered protective of human health. The addition of a 1-foot covering of clean soil over the contaminated areas will lower the risk further by limiting direct dermal contact and ingestion of contaminated soil.

  By regrading and revegetating the site, and by installing rip-rap, as needed, on the embankment sloping towards Ox Creek and its wetland, soil erosion and surface water runoff will be limited, thereby protecting the environment.

- Compliance with ARARs

  No federal or state regulation specifies soil cleanup levels for PAHs. The TSCA PCB spill policy governs the cleanup standards for PCB spills. The policy establishes requirements for PCB levels at 25 ppm for restricted access areas and at 10 ppm for unrestricted access areas. The effective date of this policy was May 4, 1987. Since the operations of the Clothier Disposal site ceased in 1986, those requirements would not be applicable, but would be relevant and appropriate.

  The maximum concentration in surface soil samples collected at the site were less than 2.5 ppm for PCBs. Therefore, this alternative would meet TSCA requirements.

  Groundwater ARARs were marginally exceeded. However, due to the presence of turbidity in the samples, the sample values may have been artificially inflated. A confirmatory round of groundwater samples were collected in December 1988. Should these results show contamination, groundwater remediation will be addressed separately in a supplemental RI/FS.

  Since limited remedial activity would occur on-site under Alternative 2, action-specific ARARs pertaining to OSHA health and safety standards, and federal minimum technical aid facility requirements would be relevant and appropriate.

  Location-specific ARARs concerning protection of wetlands and floodplains would be relevant and appropriate.

- Utilization of Permanent Solutions and Alternative Treatment Technologies to the Maximum Extent Practicable

  Alternative 2 is considered to be a permanent remedial action since the concentrations of contaminants remaining on-site are within ranges which have acceptable risk levels.

Further, contaminant concentrations and related risks will decrease over time due to natural attenuation of the contaminants. Although this remedy is not a treatment technology, it is as effective.

While treatment technologies (Alternatives 5 and 6) have a greater degree of permanence relative to the Limited Action alternative, they are not considered necessary since existing risk levels are already acceptable. There are also increased short-term risks associated with implementing these technologies. New York State has concurred that treatment is not necessary for this site.

During the remedial design phase of the project, informal consultations would be conducted with the USFWS to comply with the Endangered Species Act.

Care would be taken during the remedial design phase to comply with Executive Orders 11988 (floodplains) and 11990 (wetlands).

- Preference for Treatment as a Principal Element

  Alternative 2, Limited Action, does not treat the residual on-site soil contamination. Considering the level of residual contaminants present on-site, and the fact that the resulting risk to human health is in a range considered to be acceptable, the application of treatment technology to further lower the level of contamination and related risks does not appear appropriate.

- Cost-Effectiveness

  The Limited Action alternative is the least costly of the alternatives, other than the No-Action alternative, yet provides acceptable protection of human health and the environment.

Summary

In summary, Alternative 2 is the selected alternative. It is protective of public health and the environment, attains ARARs, and is cost effective. Because treatment of the principal threats of the site was found to be unnecessary, this remedy does not satisfy the statutory preference for treatment as a principal element of the remedy.

The estimated present worth cost for implementing Alternative 2 is $500,000.

Alternative 2 provides the best balance of trade-offs among the alternatives, examined in detail, with respect to the nine evaluating criteria.

APPENDIX 1

TABLES

TABLE 1

CHEMICALS SELECTED AS CHEMICALS OF CONCERN AT THE CLOTHIER SITE

SURFACE SOILS	UNSATURATED SOILS	GROUNDWATER
Acetone	Acetone	Bis(2-ethylhexyl)phthalate
Bis(2-ethylhexyl)phthalate	Bis(2-ethylhexyl)phthalate	1,2-dichloroethene (trans)
2-butanone	2-butanone	1,1,1-trichloroethane
Carcinogenic PAHs	Carcinogenic PAHs	Trichloroethene
4-chloro-3-methylphenol	1,2-dichloroethene (trans)	Tetrachloroethene
2,4-dimethylphenol	2,4-dimethylphenol	Xylenes
Di-n-butylphthalate	Di-n-butylphthalate	Cadmium
Di-n-octylphthalate	Di-n-octylphthalate	Chromium
Methylphenols	Methylene chloride	Manganese
N-nitrosodiphenylamine	Methylphenols	
Non-carcinogenic PAHs	N-nitrosodiphenylamine	
PCB Aroclor 1242	Non-carcinogenic PAHs	
Phenol	PCB Aroclor 1242	
Tetrachloroethene	Phenol	
Toluene	1,1,1-trichloroethane	
Xylenes	Tetrachloroethene	
Cadmium	Toluene	
Selenium	Xylenes	
Silver	Cadmium	
Thallium	Selenium	
	Silver	
	Thallium	

TABLE 2

COMPARISON OF CONCENTRATION VALUES WITH FEDERAL AND NEW Y STATE GROUNDWATER ARARS FOR CHEMICALS OF CONCERN AT TH CLOTHIER SITE

(all concentrations are in ug/liter)

	Groundwater Concentration		Federal ARARs		New York State A	
Chemical	Geometric Mean	Maximum	MCL	Proposed MCLG	Standard	Guideli
Organics						
Bis(2-ethylhexyl) phthalate	4.5	6.6	--	--	4,200	50
1,2-dichloroethene (trans)	NR	1.6	--	70	--	50
1,1,1-trichloroethane	NR	1.9	200	200	--	50
Trichloroethene	2.7	18	5	0	10	50
Tetrachloroethene	3.3	24	--	0	--	0.7
Xylenes	NR	2.3	---	---	--	50
Inorganics						
Cadium	4.5	6.9	10	5	10	--
Chromium	36.5	58.7	50	120	50	--
Manganese	2,541	23,800	--	--	300	--
Lead [a]	ND	63.5	50	20	25	--

MCL = Maximum Contaminant Level
MCLG = Maximum Contaminant Level Goal
MR = Not Reported. Chemical was detected infrequently, and the us of one-half of the detection limit in calculating a mean concentrati that exceeds the maximum reported value. Therefore, a mean will not be used.
ND = Not determined.

[a] Lead was not chosen as an indicator chemical because its presenc may not be site related. Comparison is provided as a point of information.

TABLE 3

SOIL CLEANUP LEVELS FOR PCBs AND CPAHs[1]
DIRECT CONTACT/INGESTION ROUTES
(CURRENT LAND-USE SCENARIO)

Clothier Disposal Site
Granby, New York

Lifetime Carcinogenic Risk Level		Soil Cleanup Level (ug/kg) Worst Case	Average Case
10^{-4}	PCBs	*	*
	CPAHs	*	*
10^{-5}	PCBs	*	*
	CPAHs	*	*
10^{-6}	PCBs	1,566	*
	CPAHs	463	*
10^{-7}	PCBs	157	*
	CPAHs	46	*

(1) CPAH = Carcinogenic polynuclear aromatic hydrocarbons (total)

* = no cleanup required - cleanup levels exceed highest measured concentrations in on-site soils

TABLE 4

HEALTH-BASED SOIL CLEANUP LEVELS FOR PCB AND CPAHs[1]
DIRECT CONTACT/INGESTION ROUTES
(FUTURE LAND-USE SCENARIO)

Clothier Disposal Site
Granby, New York

Lifetime Carcinogenic Risk Level		Soil Cleanup Level (ug/kg) Worst Case	Average Case
10^{-4}	PCBs	*	*
	CPAHs[1]	*	*
10^{-5}	PCBs	956	*
	CPAHs	283	*
10^{-6}	PCBs	96	640
	CPAHs	28	230
10^{-7}	PCBs	10	64
	CPAHs	3	23

(1) CPAH = Carcinogenic polynuclear aromatic hydrocarbons (total)

* = no cleanup required - cleanup levels exceed highest measured concentrations in on-site soils

TABLE 5
ALTERNATIVE COMPARISON FOR COST

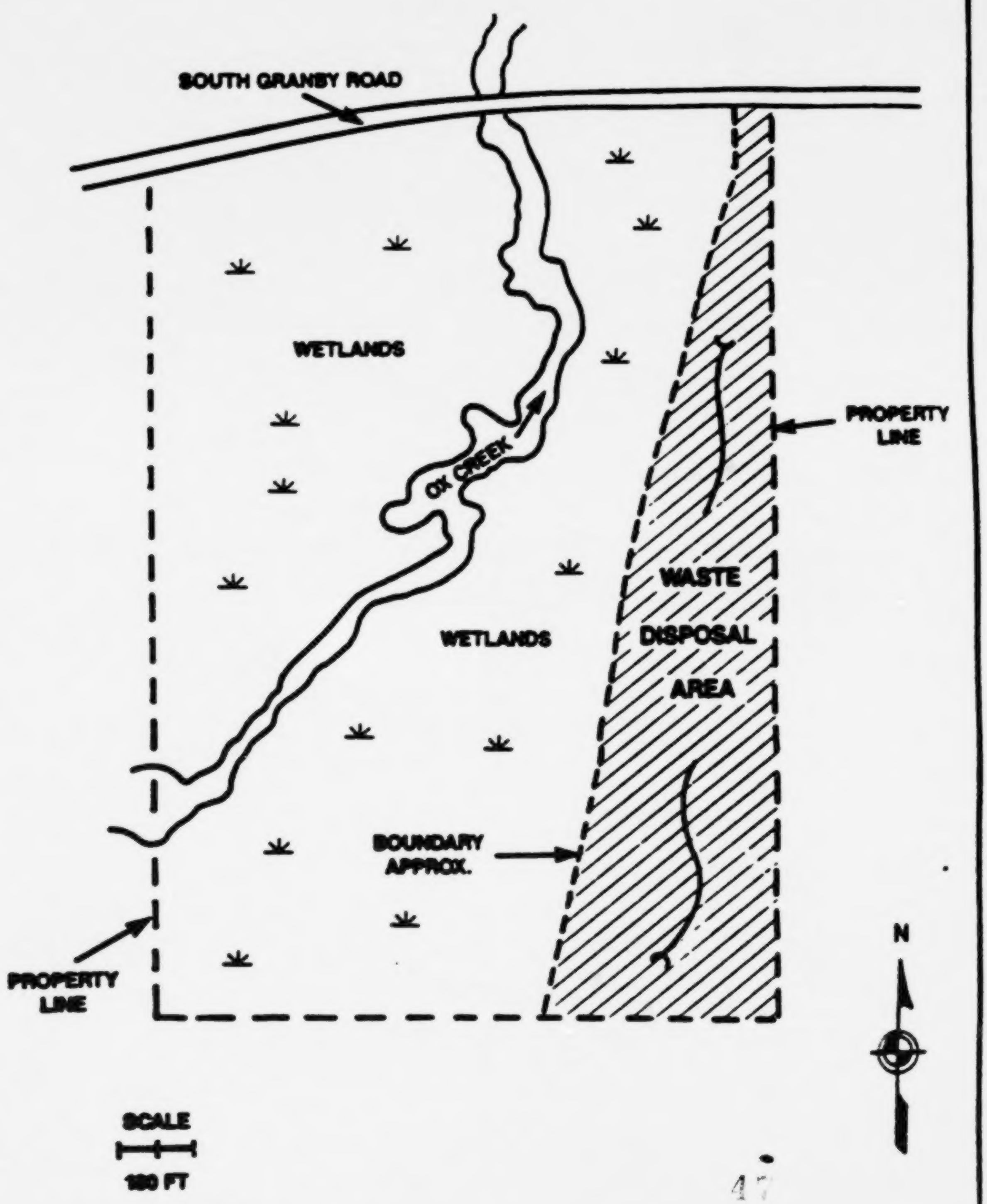
Alternative	Capital Cost ($x1000)	Annual O/M* ($/yr)	Total Present Worth ($x1000)
Alt. No. 1 No Action	0	27,000	443
Alt. No. 2 - Limited Action	60	27,000	500
Alt. No. 3 - Excavation/ Off-Site Soil Disposal	1,633	27,000**	1,633
Alt. NO. 4 - Installation of Soil Cap	223	27,000	666
Alt. No. 5 - On-Site Thermal Oxidation	3,062	27,000**	3,062
Alt. No. 6 - On-Site Solidification	1,418	35,000	1,691

* O/M Operation/Maintenance and monitoring

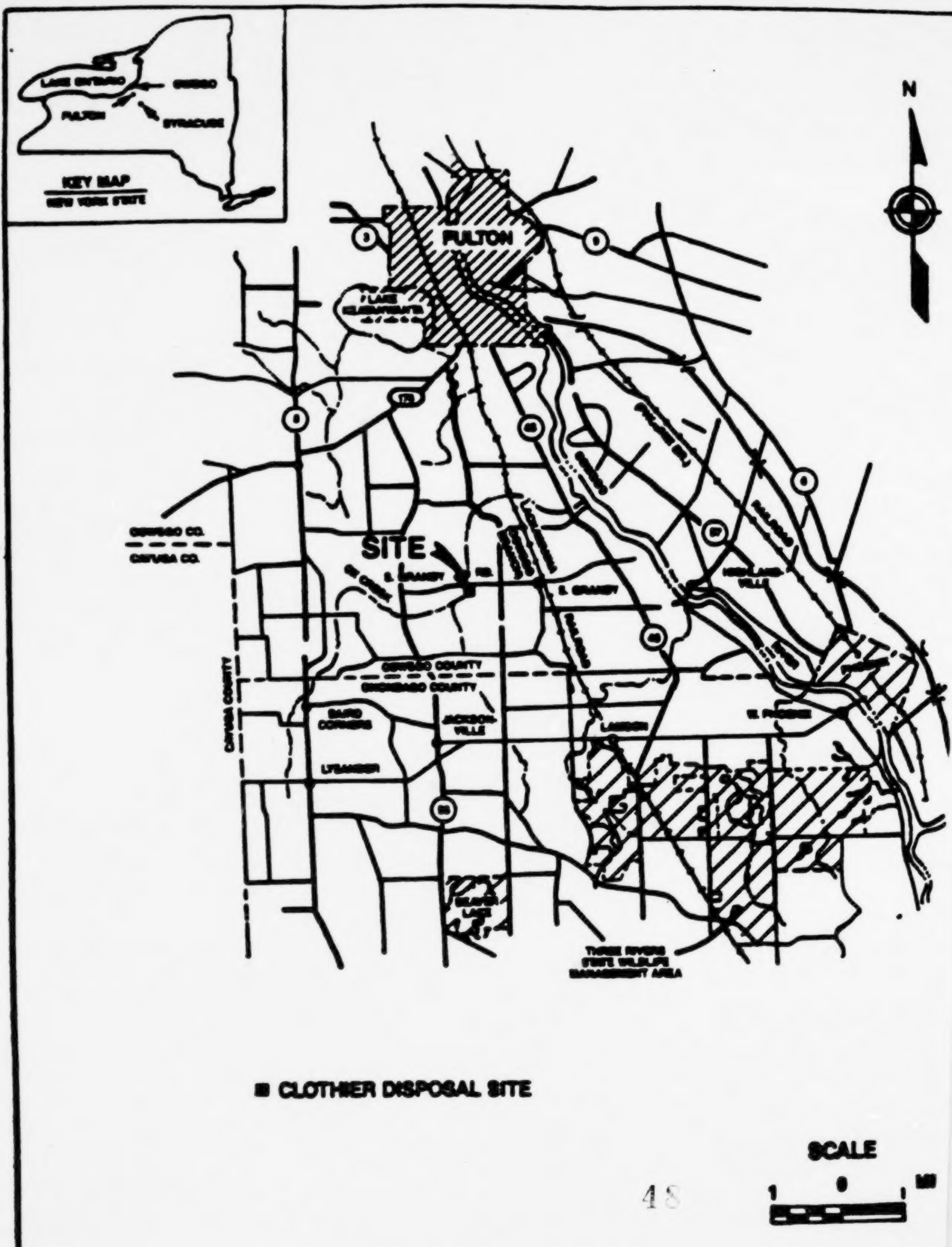
** Confirmatory sampling (estimated one-time occurrence)

APPENDIX 2

FIGURES

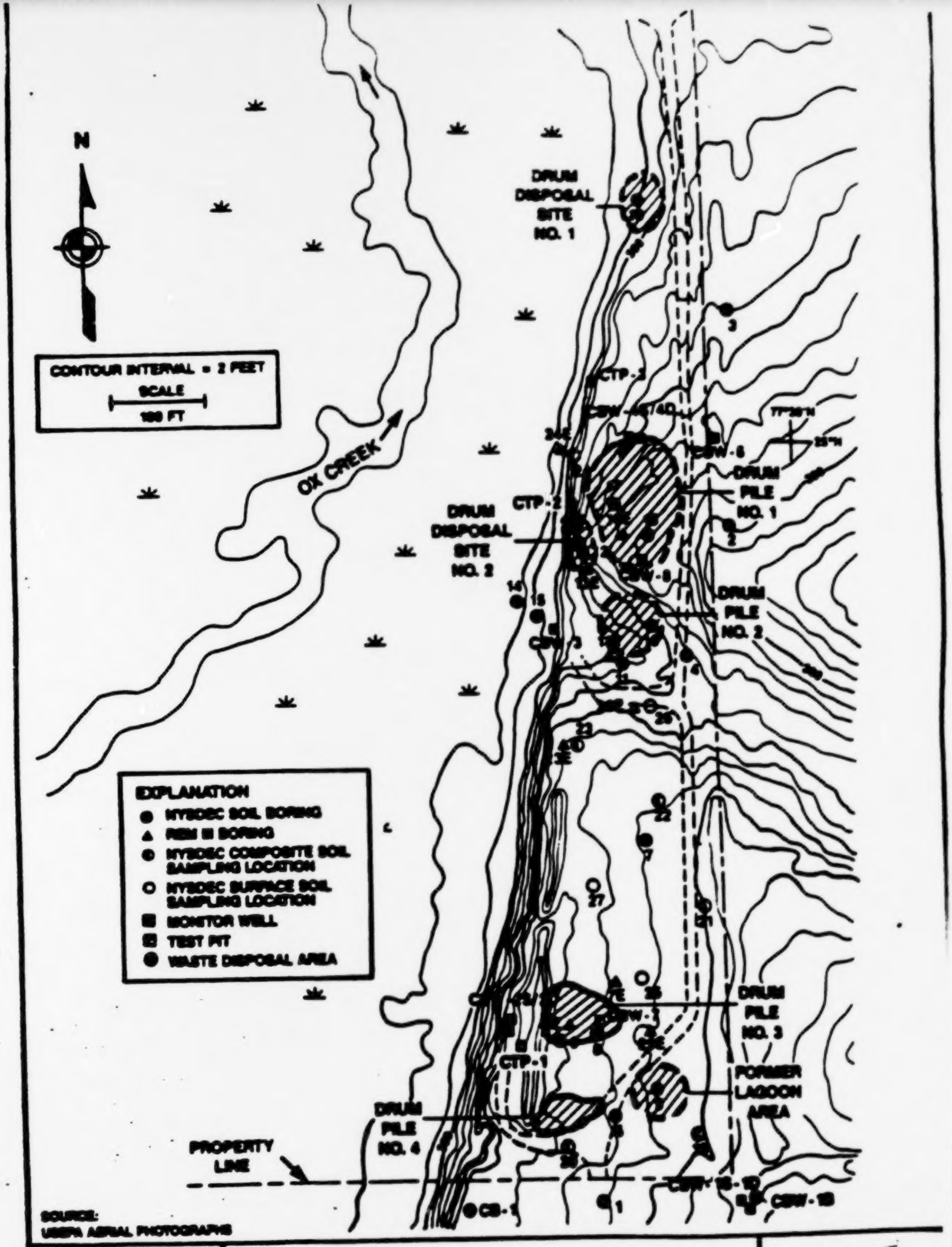

SOUTH GRANBY ROAD
WETLANDS
OX CREEK
WETLANDS
PROPERTY LINE
WASTE DISPOSAL AREA
BOUNDARY APPROX.
PROPERTY LINE
N
SCALE
100 FT
= WETLANDS

EBASCO	GENERALIZED MAP OF CLOTHIER PROPERTY	FIGURE 1


LAKE ONTARIO
OSWEGO
FULTON
SYRACUSE
KEY MAP
NEW YORK STATE
N
FULTON
LAKE NEATAHWANTA
SITE
S. GRANBY RD.
OSWEGO CO.
CAYUGA CO.
S. GRANBY
HIGHLAND VILLE
OSWEGO COUNTY
ONONDAGA COUNTY
CAYUGA COUNTY
BAIRD CORNERS
JACKSON-VILLE
LYSANDER
LAMSON
W. PHOENIX
BEAVER LAKE
THREE RIVERS STATE WILDLIFE MANAGEMENT AREA
■ CLOTHIER DISPOSAL SITE
SCALE
1 0 1 MI

48

EBASCO	SITE LOCATION MAP	FIGURE

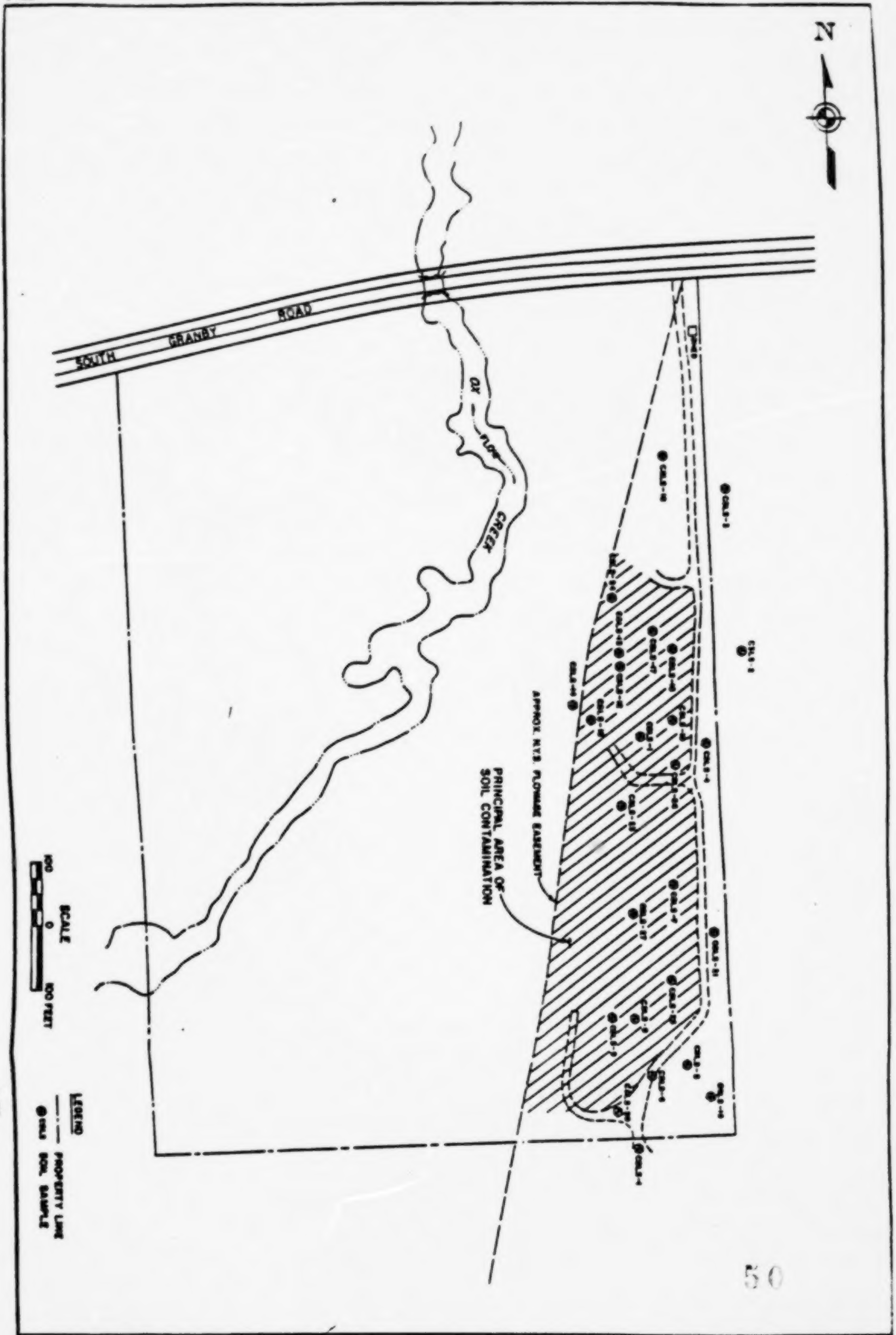

N
CONTOUR INTERVAL = 2 FEET
SCALE
100 FT
OX CREEK
DRUM DISPOSAL SITE NO. 1
DRUM DISPOSAL SITE NO. 2
DRUM PILE NO. 1
DRUM PILE NO. 2
DRUM PILE NO. 3
DRUM PILE NO. 4
FORMER LAGOON AREA
PROPERTY LINE
CTP-1
CTP-2
CTP-3
CSW-4S/4D
CSW-5
CSW-6
CSW-3
CSW-1
CSW-1S-1D
CSW-1B
CS-1
EXPLANATION
● HYSDEC SOIL BORING
▲ REM III BORING
⊕ HYSDEC COMPOSITE SOIL SAMPLING LOCATION
○ HYSDEC SURFACE SOIL SAMPLING LOCATION
■ MONITOR WELL
⊠ TEST PIT
● WASTE DISPOSAL AREA

SOURCE:
USEPA AERIAL PHOTOGRAPHS

EBASCO

WASTE DISPOSAL AREAS

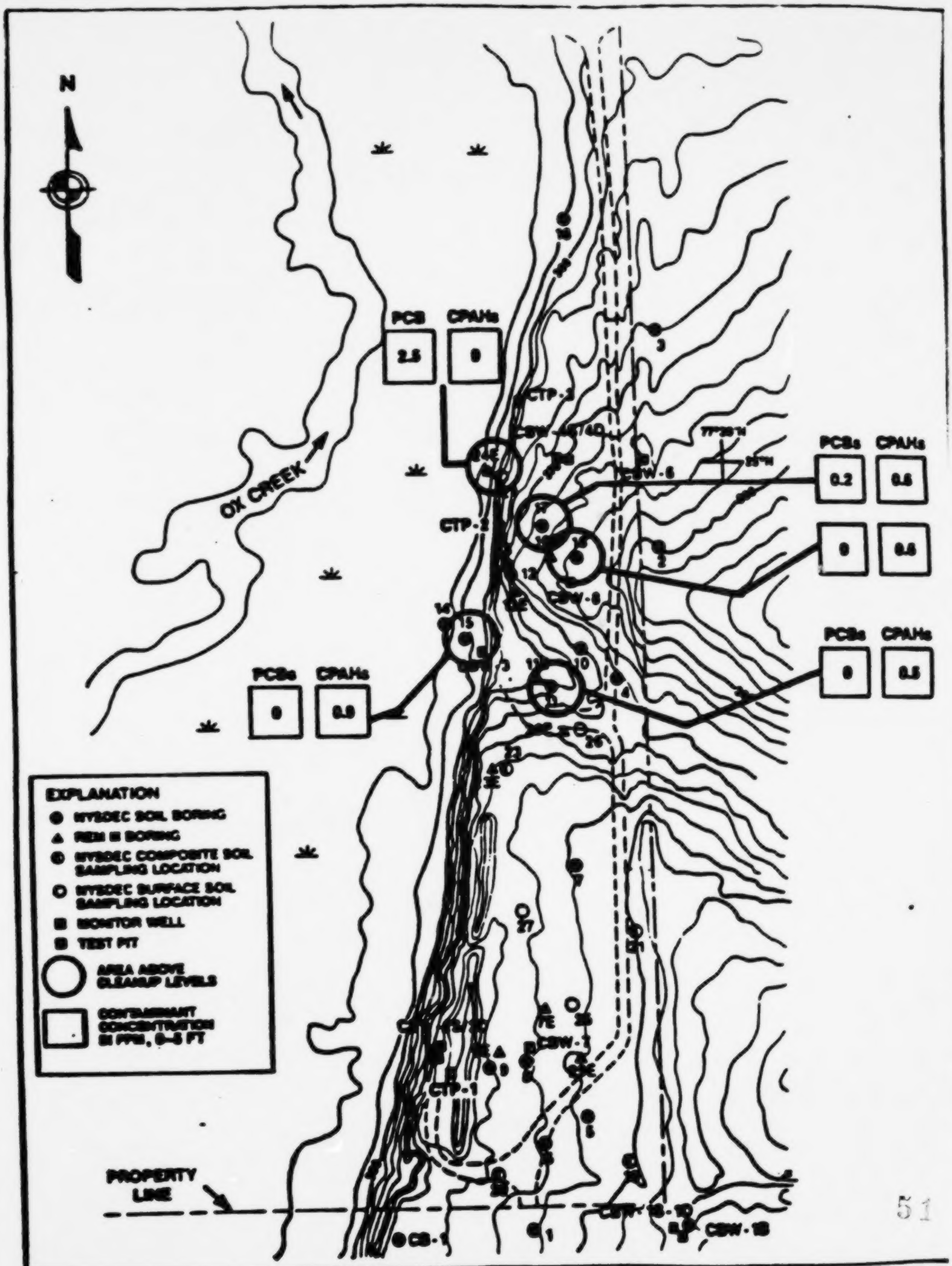
FIGURE 3


N
SOUTH GRANBY ROAD
OX CREEK
FLOW
APPROX. N.Y.S. FLOWAGE EASEMENT
PRINCIPAL AREA OF SOIL CONTAMINATION
SCALE
100 0 100 FEET
LEGEND
PROPERTY LINE
● OBLS SOIL SAMPLE

URS Company, Inc.
CONSULTING ENGINEERS
NEW YORK NEW JERSEY

PRINCIPAL AREA OF SOIL CONTAMINATION

FIGURE 4


N
OX CREEK
PCB
2.5
CPAHs
0
CTP-3
CSW-4S/4D
CSW-5
CTP-2
CSW-6
PCBs
CPAHs
0.2
0.6
0
0.6
PCBs
CPAHs
0
0.5
PCBs
CPAHs
0
0.6
CTP-1
CSW-1
PROPERTY LINE
CSW-1B
CS-1
EXPLANATION
● HYSDEC SOIL BORING
▲ REM III BORING
HYSDEC COMPOSITE SOIL SAMPLING LOCATION
○ HYSDEC SURFACE SOIL SAMPLING LOCATION
MONITOR WELL
TEST PIT
AREA ABOVE CLEANUP LEVELS
CONTAMINANT CONCENTRATION IN PPM, 0–3 FT

EBASCO	CONTAMINATED AREAS ABOVE THE CLEANUP LEVELS	FIGURE 5

APPENDIX 3

ADMINISTRATIVE RECORD INDEX

APPENDIX 4

NYSDEC LETTER OF CONCURRENCE

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233 -7010

Thomas C. Jorling
Commissioner

Mr. William J. Muszynski, P.E.
Acting Regional Administrator
U.S. Environmental Protection Agency
Region II
26 Federal Plaza
New York, New York 10278

DEC 23 1988

Dear Mr. Muszynski:

Re: Clothier Site (738014)
Record of Decision

The State of New York has reviewed and concurs with the source control remedy put forth in the Final Record of Decision (ROD) dated December 23, 1988 for the Clothier Disposal Site. The groundwater and adjacent wetland are not addressed by this remedy and will be the subject of separate operable units if the sampling conducted in December 1988 indicates a problem.

The selected remedy calls for placement of one foot of clean soil cover over the contaminated areas of the site; regrading and revegetating the site to prevent soil erosion and to minimize surface water run-off from the contaminated areas of the site into Ox Creek and adjacent wetlands; installation of rip-rap as needed; long-term monitoring of the remedy, including additional wells and private water supplies as needed; pre- and post-construction air monitoring; and potential easements to control future development of the site.

Design and construction of the remedy must prevent diversion of run-off onto neighboring farmlands; include additional soil sampling and air monitoring to further define the area of the site to be covered; and further evaluate the extent of rip-rap and type of vegetative cover which will be conducive to the wildlife habitat.

If you have any questions regarding this matter, please contact Mr. Michael J. O'Toole, Jr., at (518) 457-5861.

Sincerely,

Edward O. Sullivan
Deputy Commissioner

cc: R. Tramontano

APPENDIX 5

RESPONSIVENESS SUMMARY

FINAL

RESPONSIVENESS SUMMARY

CLOTHIER DISPOSAL SITE

REMEDIAL INVESTIGATION/FEASIBILITY STUDY

OCTOBER 5, 1988 PUBLIC MEETING

Town of Granby, Oswego County, New York

by the

New York State Department of Environmental Conservation

and

United States Environmental Protection Agency

January, 1989

Clothier Drum Site
Granby, New York
Responsiveness Summary

A. **Overview**

The United States Environmental Protection Agency (USEPA) and the New York State Department of Environmental Conservation (NYSDEC) held a public participation meeting on October 5, 1988 in the Granby Town Hall, Granby, New York to discuss the Proposed Remedial Action Plan (PRAP) for the Clothier Drum Disposal site and the Remedial Investigations/Feasibility Studies (RI/FS) performed by URS Co., Inc. and Ebasco Services, Inc., under contract to the NYSDEC and USEPA, respectively. The selected remedy outlined in the PRAP was based on the Remedial Investigation/Feasibility Study Clothier, Town of Granby Oswego County, New York prepared by URS Company, Inc., August 1988 and Final Supplemental Remedial Investigation Report and final Feasibility Study, Clothier Disposal Site, Granby, New York, prepared by Ebasco Services Inc, July 1988. The selected remedy called for:

- placement of a 1 foot clean soil cover, brought from an outside source, over the contaminated areas

- regrading and revegetating the site to limit soil erosion and surface water run-off towards Ox Creek and its wetland

- installing rip-rap on the embankment sloping towards Ox Creek to prevent soil erosion and surface water run-off

- a long term groundwater, soil, and Ox Creek sediment and surface water monitoring program to evaluate any changes, should they occur.

Modifications of this remedy occurred as a result of comments and the final remedy is presented in the Record of Decision (ROD), December, 1988.

Both RI/FS reports and the PRAP were made available for public review on September 6, 1988 at the Granby Town Hall, City of Fulton Public Library, Virginia Gary residence and the NYSDEC Central Office, with the public comment period ending November 4, 1988.

The selected remedy discussed at the October 5, 1988 meeting was a radical change from the selected remedy of thermal destruction of wastes and highly contaminated soils presented at a July 1987 public meeting. While this change is a result of the determination that additional soil sampling and surface water data were needed and faulty laboratory quality assurance and quality control (QA/QC), it does raise public concern on the adequacy of the selected remedy.

The community, in general, expressed concern about the proposed remedy for the remaining residual soil contamination because it was not a permanent remedy; an 11-acre wetland adjacent from the site was not adequately investigated; and that they desired to obtain a technical assistance grant (TAG) to retain a technical advisor to review the information and proposed remedial action prior to the issuance of a ROD. It was explained to the people attending the meeting, that the proposed remedy was to supplement the removal actions already taken at the site by USEPA and the responsible parties during which approximately 2000 drums of waste and 200 cubic yards of highly contaminated soil were removed from the site. Further, it was explained that the proposed remedy was to address the residual low level soil contamination which, based on health risk assessment, did not represent a significant threat to public health. It was also explained that this was a source control remedy and that if supplemental investigation of the groundwater and 11-acre wetland site detected significant contamination, they would be addressed as a separate operable unit(s). Correspondence from the Steering Committee of Responsible Parties supports the limited action remedy.

B. Background on Community Involvement

Community interest in the Clothier Drum Site has been extremely high throughout the RI/FS process and removal actions. Locally, community officials and private citizens have been active at public meetings and have routinely corresponded with the NYSDEC and USEPA. Organized groups include: Granby Town Environmental Board, Neighbors Organized to Mend Our Rural Environment (NOMORE), Fulton Safe Drinking Water Action Committee (FSDWAC), and the Central New York Toxics Coalition. Major concerns of these groups and how USEPA and NYSDEC addressed them are:

1. Citizen groups all opposed the thermal destruction process proposed during the July 1987 public meeting and comment period because of concerns about an insufficient data base and public safety and health concerns regarding potential emissions from the thermal destruction process.

Response: Review of the data determined QA/QC problems and the need to conduct further investigations prior to selecting a remedy. Additional soil sampling, a wetland study by U.S. Fish and Wildlife Service, and resampling of groundwater resulted in the revised August 1988 RI/FS report prepared by URS Inc. In addition, USEPA's consultant (Ebasco Services) prepared a Supplemental RI/FS dated July 1988. Thermal destruction is no longer recommended.

2. Citizens questioned the adequacy of the September 1988 proposed remedial action as it does not provide a permanent remedy.

Response: The proposed action supplements the removal of over 2000 drums of waste and over 200 cubic yards of highly contaminated soil scraped from the site. While Federal regulations require that preference be given to permanent remedies, the public health risks associated with the residual low level soil contamination were determined to be "not significant" and the proposed action is considered adequate to protect public health. The Agency for Toxic Substances and Disease Registry (ATSDR) supported this conclusion at the public meeting.

3. Citizens pointed out that the U.S. Fish and Wildlife Study (USFWS) did not address the 11-acre wetland adjacent to the site.

Response: The 11-acre wetland was studied in December 1988. Results will be made available to the public. Delay of the ROD is not necessary as the proposed remedy is a source control operable unit. If the sampling conducted in December 1988 indicates the need for additional remedial actions for the wetland or groundwater, remediation will be conducted as a separate operable unit(s).

4. Citizens requested that issuance of the ROD be delayed until a local environmental organization obtained a technical assistance grant (TAG).

Response: The USEPA does not agree that the issuance of the ROD should be delayed until a TAG is awarded. While a "letter of intent" to apply for a TAG was submitted on May 19, 1988, a TAG application was not submitted until October 27, 1988. To delay issuance of a selected remedy until a TAG is obtained and a technical advisor is hired, would seriously delay remediation of the residual soil contamination at the site.

5. Several neighboring property owners expressed concern that remedial alternatives might impact their properties. During the July 1987 public meeting, air emissions from a thermal destruction unit or excavation was of concern. During the October 1988 public meeting, concern was expressed that any regrading of the site might divert run-off onto neighboring properties.

Response: Thermal destruction is no longer a selected remedy. A construction and post construction air monitoring program has been incorporated into the selected remedy. Design of the selected remedy will minimize run-off from the site and avoid diverting additional water onto neighboring properties.

6. Neighboring residences and the State Health Department expressed concern that additional sampling of private wells was not addressed.

Response: The selected remedy has been revised to provide for additional sampling of private wells neighboring the site as part of the long term monitoring program, as warranted. Details of the long term monitoring plan will be developed after the information from the December 1988 wetland and groundwater sampling is evaluated, but may include additional monitoring wells between the site and potentially downgradient residences.

C. Summary of Comments Received During Public Comment Period

Comments raised during the public comment period and at the October 5, 1988 meeting for the September 1988 PRAP, the July 1988 Supplemental RI/FS Report prepared by Ebasco Services and the August 1988 RI/FS Report prepared by URS Inc., are summarized briefly below by relevant topic. A summary of comments received for the July 1987 public meeting and earlier draft RI/FS reports which recommended thermal treatment are appended to this document for reference.

Remedial Alternative Preference

1. The proposed remedial action is not a remedy which will permanently remove the hazardous wastes from the site. Why wasn't a permanent remedy chosen?

Response: Federal regulations regarding the clean-up of hazardous waste sites require that the NYSDEC and USEPA show a preference for permanent remedies. Given the fact that the levels of contaminants found on the Clothier site were so low as to not pose a significant public health risk, the proposed actions are felt to be appropriate. In addition, more than 2000 drums of waste and over 200 cubic yards of highly contaminated soil have been removed from the site. The removal of these wastes constitute a permanent remedy for these wastes relative to this site.

2. There is an area of wetland, approximately 10-11 acres in size, which has not been sampled. How can a remedy be selected which does not address this wetland or the documented low level groundwater contamination?

Response: The NYSDEC/USEPA agree that this area of the wetland needs to be studied. The USFWS study of the wetland, as well as visual inspections of this area, do not indicate that drums of hazardous waste were ever disposed in this area. The USEPA collected samples of water and sediment from the wetland and additional groundwater samples in December 1988. If this additional sampling of the wetland and groundwater shows the presence of significant levels of contamination, appropriate measures will be taken to remediate the problems as a separate operable unit. The proposed remedial action at the site will not interfere with any potential future remedial actions for the wetland or groundwater.

Technical Questions/Concerns Remedial Alternatives

1: Where did the data for the Ox Creek wetland impact assessment come from?

Response: The USFWS study.

2: Did the locations of soil contamination correspond to the locations where drums were stored?

Response: Yes.

3: What areas of soil contamination does the Ebasco RI/FS identify as the 2,500 cubic yards needing remediation?

Response: Generally the areas where drums were once stored, down to a depth of approximately 5 feet.

4: Will the proposed remedial actions prevent runoff from the site to adjacent properties?

Response: Yes, the proposed remedial actions include measures to regrade, revegetate and construct other drainage control structures to prevent contaminated soil from migrating off site to adjacent properties.

5: Was any sampling done for the presence of radioactive wastes?

Response: During the initial waste characterization done for the RI in 1985, two drums were found to contain low level radioactive wastes. The level of radioactivity was only slightly above background levels. These drums were removed and the area was surveyed for residual radiation, none was detected.

6: What guarantee is there, that long-term monitoring will be performed?

Response: The NYSDEC is bound by an agreement with the USEPA to insure that a long-term monitoring program is developed and implemented for a period equal to the design life of the remedial action or 30 years, whichever is less.

Public Participation Process

1. There were several complaints that not enough time was allowed for public comments for the September 1988 PRAP and public meeting.

Response: The public participation meeting was rescheduled to a later date, October 5, 1988, than originally proposed and the comment period extended to November 4, 1988. The total public comment period was approximately 60 days.

2. The Town of Granby and several citizens requested that the issuance of a ROD be delayed until a Technical Assistance Grant was obtained to hire a technical advisor.

Response: No application had been received as of the date of the public meeting. An application for a TAG was received on October 27, 1988. Delaying the issuance of a ROD until the grant is awarded and a technical advisor is hired will seriously delay remediation of the site.

Cost and Funding Issues

1: Have the possible economic impacts on adjacent property values been considered in the selection of a remedy?

Response: The assessment of economic impacts on the surrounding area are not considered in the selection of the remedy. While it is desirable to protect neighboring property values, the USEPA cannot guarantee that the remedies chosen will restore any potential economic loss sustained by neighboring properties. The top priority in selecting a remedy is always the protection of human health and the environment. The NYSDEC and USEPA feel the proposed actions will be adequately protective of human health and the environment.

2: What do the costs presented in the PRAP represent?

Response: The PRAP gives capital costs as well as present worth costs which are a summation of the capital costs plus annual operation and maintenance costs for 30 years, adjusted to present worth or 1988 value.

Enforcement

1. Will Mr. Clothier have to pay for the RI/FS and remediation of the site? Who will pay for these remedial actions?

Response: Remediation of the site can be funded by the Federal Superfund or responsible parties. Mr. Clothier is a responsible party and is subject to cost recovery along with the generators of the waste material that went to the Pollution Abatement Services site. This would have to be addressed in future litigation.

2. What restrictions can be placed on Mr. Clothier to prevent future contamination of the site and remove the junk cars from the site? How can future misuse of the site be prevented?

Response: Restrictions of land use would have to be obtained through taking easements or other litigation consistent with New York State Real Property Law. The junk cars at the site do not fall under State jurisdiction but are subject to local ordinances. Periodic inspections will be made to assure that hazardous wastes are not disposed of at the property.

D. Remaining Concerns

1. What areas of the site will be covered with the one foot soil cover? The URS Report and Ebasco Report indicate different areas of the site as being significant.

Response: This will be determined during the design phase by additional soil sampling and possible pre-construction air surveys.

2. Will run-off from the site be diverted into neighboring farmlands?

Response: Additional run-off will not be diverted onto neighboring farmlands. The design will minimize run-off from the site.

Attachment #1

Summary of Questions

Clothier Disposal Site

Remedial Investigation/Feasibility Study

July 30, 1987 Public Meeting

Town of Granby, Oswego County, New York

by

New York State Department of Environmental Conservation

Clothier Disposal Site
Summary of July 30, 1987 Public Meeting
Remedial Investigation/Feasibility Study
Granby Town Hall, Oswego County, NY

The New York State Department of Environmental Conservation (NYSDEC) held a public informational meeting on July 30, 1987 at the Granby Town Community Center to discuss the Clothier Site Remedial Investigation/Feasibility Study (RI/FS) performed by URS Company, Inc., under contract to the NYSDEC. Present at the meeting were representatives from: NYSDEC, URS, United States Environmental Protection Agency (USEPA), United States Fish and Wildlife Service (USFWS), New York State Department of Health (NYSDOH), Oswego County Health Department, Agency for Toxic Substances and Disease Registry (ATSDR), concerned citizens groups, concerned individuals, local government officials and the news media.

The RI/FS was made available for public review on July 7, 1987 at the Granby Town Hall, City of Fulton Public Library, the NYSDEC Region 7 Office and the NYSDEC Central Office. The following is a summary of questions and comments received during the comment period.

Question: Will the proposed thermal treatment process remove metals contamination from the soil? Would the bioreclamation process result in the removal of the organic contamination?

Answer: Thermal treatment will remove only organic contaminants but not inorganic contaminants such as metals. We do not believe the concentration of metals to be high enough to pose a problem but further testing would have to be done to determine if the metals are leachable.

The bioreclamation process would remove the organic contaminants but not the inorganic contaminants. It is also possible that the inorganic contaminants such as the metals could be toxic to microorganisms necessary for the biological degradation of the contaminants.

Question: Was URS told by the NYSDEC and USEPA to choose the thermal treatment alternative because of policy?

Answer: URS was hired to provide their professional judgement and recommendations. They are not and were not told which remedial alternative to recommend.

Question: Was URS the only consultant used? Did the NYSDEC edit the URS report?

Answer: URS was hired by the NYSDEC as the prime engineering consultant. URS subcontracted portions of the work to other firms who provided services such as: well drilling, sample analyses and hydrogeology. The NYSDEC and USEPA review and comment on preliminary versions of the RI/FS reports, but do not edit or in any way try to influence the professional judgement of the consultant.

Question: Why doesn't thermal treatment remove heavy metals?

Answer: Thermal treatment, by definition uses heat to combust or destroy organic (carbon containing) compounds. Heavy metals do not contain carbon. Some heavy metals may be volatilized by the heat, buy they will not be substantially altered.

Question: Does EPA withhold money if the remedial alternative they favor is not chosen?

Answer: As a site on the National Priority List of Inactive Hazardous Waste Sites (NPL), the final decision on the selection of a remedial action is made by USEPA, who will then provide 90 percent of the construction funding.

Question: Would the thermal treatment result in a reduction in soil volume and a corresponding increase in heavy metal concentration?

Answer: Given the relatively low concentrations of hazardous wastes in the soil, there will not be a significant decrease in volume of the treated soil. In addition, the treatment will fluff the soil slightly.

Question: What happened to the junk cars and debris on the site?

Answer: They have been moved to the eastern edge of the site, out of the way of the removal activities.

Question: Has the remedial alternative been selected or is there still the potential for a change? What legal agreements have been made or will be made with the Potentially Responsible Parties (PRP) regarding their input on the chosen remedial alternative?

Answer: The purpose of this public meeting is to provide the DEC and EPA recommendation for a remedial action, to the public. Your comments and concerns will be recorded and presented to the EPA Regional Administrator who will make the final decision. The PRP's are given the opportunity to review and comment on the RI/FS, just as the public is. Following the issuance of a Record of Decision (ROD), the PRP's are given 60 days to accept responsibility for undertaking further remedial measures. After that time, if the PRP's do not accept responsibility, the DEC and EPA will go forward with the action using Superfund money and then take legal action against the PRP's to recover all government costs incurred.

Question: Will it be the responsibility of EPA, DEC or the PRP to obtain insurance to cover damage to the public or the environment?

Answer: The contractor hired to undertake the remedial action will have insurance to cover damages resulting from his negligence. The Federal government will cover damages resulting from incidents other than contractor negligence.

Question: Have environmental impact studies been done on the thermal treatment process?

Answer: Thermal treatment has been used for many years for the destruction of hazardous waste at commercial facilities throughout the world, with little if any, adverse environmental impacts. The thermal treatment units used are very efficient in destroying the wastes and in removing contaminants from the air emissions. The specifications for the operation of the treatment unit at the Clothier Site will be set during the remedial design process and will be defined in accordance with State and Federal Standards.

Question: What level of public impact is needed to have an impact on the EPA decision?

Answer: It is up to the discretion of the EPA Regional Administrator. All public comments will be recorded and reviewed by the Regional Administrator and will have an impact on his decision.

Question: What happens if you discover buried drums while excavating the contaminated soil?

Answer: If the drums contain hazardous waste, they will be either treated on-site in the thermal treatment unit, or removed from the site for treatment at a commercial hazardous waste facility.

Question: What does a thermal treatment unit look like?

Answer: They vary depending on the specific unit, but they all contain a combustion chamber followed by numerous systems for cleansing and cooling exhaust gases.

Question: Will there be a warning or ban on fishing in the Ox Creek after the wetland study is completed?

Answer: That will depend on the results of the study.

Question: Will the DEC and EPA wait for the Fish and Wildlife study to be completed before making a final decision of the remedy?

Answer: No. The findings of the wetland study will not affect the plans for remediation of the contamination on-site. If the wetlands study shows contamination in that area the appropriate actions will be taken to deal with that contamination.

Question: Are there air emission standards for specific contaminants that are to be thermally treated?

Answer: NYSDEC publication entitled, Air-Guide 1 defines emissions standards for the significant contaminants.

Question: Have two RI/FS's been done? What was the chosen remedy in the first RI/FS? Why was that remedy not selected?

Answer: There is only one RI/FS, but the preliminary draft report prepared by URS recommended bioreclamation, a form of biological treatment. This report was not released to the public because the DEC felt URS should investigate other treatment technologies.

Question: Why is thermal treatment being encouraged so much?

Answer: Thermal treatment is a reliable and effective means of permanently destroying hazardous wastes. Because the technology has existed for several years, it is proven and therefore favored over experimental processes.

Question: Will the chemical contaminants in the soil cause an explosion during the thermal treatment process?

Answer: The levels of contamination in this soil is not high enough to cause an explosion. If it were, the temperature and rate at which the waste is fed into the treatment unit is controlled to guard against explosion.

Question: How deep will the soil be excavated?

Answer: Our preliminary estimates are approximately 10 feet, or to the water table. Further sampling will be done to better define the areal and vertical extent of contamination.

Question: Who owns the site and who is paying the taxes?

Answer: Richard Clothier

Question: Will there be more sampling of homeowner wells in the vicinity of the site?

Answer: The samples taken have not shown the presence of contamination which could be attributed to the site. No further sampling is planned.

Question: Has consideration been given to using more than one treatment process to remove the hazardous wastes?

Answer: Yes. It may be necessary to treat the soil beyond the thermal treatment, in order to remove an inorganic contaminant not removed by the thermal treatment.

Question: How much of the contamination do you feel has left the site and migrated to the Oswego River and to the Fulton municipal wellfields?

Answer: Surface water and sediment samples collected from the Ox Creek area, the area into which the site drains, did not show the presence of contamination. In addition, groundwater samples did not show the presence of contamination exceeding NYSDEC Groundwater Quality Standards. Visual inspection of the Ox Creek wetland did not indicate the presence of hazardous waste. Based on this, there is no evidence to indicate that any contamination has migrated off the Clothier site.

Question: After thermal treatment, what can the soil be used for?

Answer: The treated soil will be decontaminated and will be available for any normal use.

Attachment #2

Community Relations Activities

Clothier Drum Disposal Site

Granby, Oswego County, New York

Community relations activities conducted at the Clothier Drum Disposal site to date include:

* NYSDEC/USEPA conducted a public information meeting to discuss the Clothier Site and discuss the ongoing Remedial Investigation/Feasibility Study (RI/FS) (May 1986)

* USEPA conducted community interviews with local officials and interested residents (July 1986)

* NYSDEC/USEPA conducted a public information meeting to discuss the preliminary results of the RI/FS (November 1986)

* NYSDEC/USEPA conducted a public meeting to discuss the final draft RI/FS prepared by URS, Inc., which recommended thermal destruction (July 1987)

* NYSDEC/USEPA conducted a public meeting to discuss the revised RI/FS prepared by URS (August 1988) and Supplemental RI/FS prepared by Ebasco Services Inc., (July 1988) and the September 6, 1988 Proposed Remedial Action Plan (October 1988)

* NYSDEC/USEPA routinely corresponded with local citizens, local environmental groups, and local officials throughout the RI/FS.

Mr. Gary Kerzic
Project Manager
NYS Dept. of Environmental Conservation
50 Wolf Avenue
Albany, N.Y. 12233

Dear Mr. Kerzic,

As a resident of the Town of Granby, member of NO MORE (Neighbors Organized to Mend Our Rural Environment), member of the Town of Granby Environmental Board and member of the Oswego County EMC (Environmental Management Council) I would like to go on record opposing the EPA - DEC Clothier PRAP (Proposed Remedial Action Plan).

First and foremost is the fact that we are in the process of applying for TAG (Technical Assistance Grant) money. Since FSDWAC (Fulton Safe Drinking Water Action Committee for Environmental Concerns Inc.) has already received their grant we are hoping that our application will be processed promptly. We would therefore request that we be given the opportunity to use this grant to hire a Technical Advisor to assist us before commenting upon the PRAP.

The October 5, 1988 public meeting in Granby revealed an 11 acre section of the Clothier site that had not been sampled or studied. This omission renders the PRAP as incomplete. We request a delay until results of this area are available.

Health issues were also not addressed in the PRAP. Mr. Nelson from ATSDR (Agency for Toxic Substance and Disease Registry) reported at the October 5, 1988 meeting that his report was in draft form and would soon be available to us for reveiw. I question the validity of this report since it appears to be based on the study done by USFWS (United States Fish and Wildlife Service) which did not study humans.

At this point I think removal of the "Hot Spots" to a secured landfill would be an acceptable interim measure until the final ROD (Record of Decision) is decided.

Sincerely,

Diane Hartman

Diane Hartman

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233 -7010

Thomas C. Jorling
Commissioner

NOV 7 1988

Ms. Diane Hartman
Granby Environmental Board
Town of Granby
RD #7, Box 369
Fulton, NY 13069

Dear Ms. Hartman:

Re: Clothier Disposal Site
Proposed Remedial Action Plan

Thank you for your recent letter regarding the October 5, 1988 public meeting on the Proposed Remedial Action Plan (PRAP) for the Clothier Site.

The PRAP presented at the October 5, 1988 meeting relates to the Remedial Investigation/Feasibility Study (RI/FS) performed on the approximately 5 acre area of the Clothier property on which hazardous waste activities occurred. The RI/FS concentrated primarily on this 5 acres, known as the "site", but also included limited sampling of the adjacent Ox Creek wetland. In addition, the United States Fish and Wildlife Service (USFWS) has completed an extensive 2 year study of the Ox Creek wetland which included sampling of surface water, sediment, plants, fish and small mammals. This study did not show the presence of contamination which could be attributed to hazardous waste activities on the Clothier Site. There were low levels of pesticides detected in some of the samples which are not a result of the Clothier site, but more likely due to agricultural activity in the surrounding areas.

The studies performed by both URS and the USFWS show that contamination is present only in a few isolated areas within the site. These levels of contamination are so low as to not pose a significant threat to public health. The PRAP discusses the proposed actions for dealing with the areas on the site which contain these low levels of soil contamination.

The USFWS study investigated the Ox Creek wetland for the presence of hazardous waste contamination migrating from the Clothier site. Through the collection of plant, fish and small mammals which inhabit this wetland, the USFWS was able to determine if contamination was present in this area as well as its affect on the environment.

Based on the findings of the RI/FS, and the USFWS study, it is unlikely that contamination exists in an approximately 10 to 11 acre area between the site and Ox Creek. Visual inspections of this 10 acre area did not show the presence of drums of hazardous waste nor was there any indication of hazardous waste handling activities. In order to satisfy public concerns with this area and to confirm our belief that this area is not contaminated, the U.S. Environmental Protection Agency (USEPA) plans to sample this area in late November or early December 1988.

A major activity of the RI/FS performed by both URS and Ebasco Services, Inc. was a public health risk assessment on exposure to contamination detected both on and off the Clothier site. The results of this health risk assessment play a significant role in determining what remedial measures are most appropriate. It is true that the Agency for Toxic Substances and Disease Registry (ATSDR) has not completed their health assessment of the Clothier site. Mr. William Nelson of ATSDR stated at the October 5 meeting that he felt the actions proposed in the PRAP were appropriate for dealing with any potential risk that may exist.

The use of the term "Hot Spots" is misleading and not a proper descriptive terms for the contamination remaining in the soil on the site. There are areas on the site in which contamination is the most concentrated. Even at the highest detected levels though, the potential health risk is not significant. The excavation and removal of hazardous wastes for burial at a secure landfill is the least favored option by both the New York State Department of Environmental Conservation (NYSDEC) and the USEPA. It serves only to move the problem from one site to another and is not an answer to the overall problem of contamination of the environment.

At the request of members of the Granby community, the USEPA extended the official comment period for review of the RI/FS and PRAP from 21 days to 60 days. In addition, a public informational meeting was held to explain the RI/FS and PRAP and to discuss comments and questions from the public. The USEPA and NYSDEC are committed to community involvement in the remediation of hazardous waste sites, but are equally committed to the remediation of these sites as expeditiously as possible. Having a technical assistant during the public comment period could certainly facilitate the community's understanding of the technical issues associated with this project, it is not essential to involving the public in the remediation process.

Sincerely,

Gary T. Kerzic, P.E.
Project Manager
Bureau of Eastern Remedial Action
Div. of Hazardous Waste Remediation

GTK/slj

bcc: w/incoming R. Brazell - Region 7
S. Miller - Region 7

OSWEGO COUNTY LEGISLATURE

COUNTY OFFICE BUILDING • OSWEGO, NEW YORK 13126
TELEPHONE (315) 593-2832

MARGARET L. STREITENBERGER
Oswego County Legislator
RD 1 - BOX 145
WEST RIVER ROAD NORTH
FULTON, NEW YORK 13069

November 1, 1988

Gary Kerzic
Project Manager
New York State Department of
Environmental Conservation
50 Wolf Road
Albany, New York 12233

Re: Clothier Site ROD
Response to PRAP

Dear Mr. Kerzic:

I strongly urge delaying a final selection of the remedial action alternative and the formalizing of this selection into a Record of Decision regarding the Clothier Site.

The residents of Granby have been the initiators of concern for this site and continue to be interested and concerned that their input be considered. This is where they live....and where their children will live. They need to be heard. Their representatives on the Environmental Board and in the citizen's organization of NOMORE should have the opportunity to complete this process through the Technical Assistance Grant to satisfy all their questions and concerns before a final decision is made.

The efforts made by DEC and EPA to clean up this site and remain in communication with the concerned citizens have been appreciated. I encourage you to keep this door open. Please allow time for the "full use" of Technical Assistance by the citizens. Share fully your reports and information with the Environmental Board and citizens of NOMORE. They will be your best communicators with the Town of Granby citizenry and assist in bringing about full cooperation in the final ROD.

Very truly yours,

Margaret Streitenberger

Margaret Streitenberger
Oswego County Legislator
Town of Granby

MS/hr
cc: Nancy Nolan, NOMORE
Ginny Gary, Granby Environmental Board

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233

Thomas C. Jorling
Commissioner

Ms. Margaret Streitenberger
Oswego County Legislator
Town of Granby
R.D. 1 - Box 145
West River Road North
Fulton, NY 13069

NOV 10 1988

Dear Ms. Streitenberger:

Re: Clothier Site
Proposed Remedial Action Plan

Thank you for your letter of November 1, 1988 regarding the remedial actions proposed by the New York State Department of Environmental Conservation (NYSDEC) and the United States Environmental Protection Agency (USEPA) for the Clothier Site.

In order to best respond to your letter and the issues of greatest concern to the Granby community, I have enclosed my response to a recent letter from Mrs. Virginia Gary, Chairperson, Granby Environmental Board.

The NYSDEC and USEPA are both committed to public involvement in the remediation of hazardous waste sites and feel that the citizenry plays an essential role in the process. Though we make our best effort, a thorough understanding of all the issues is not always acheived.

Sincerely,

Gary T. Kerzic

Gary T. Kerzic, P.E.
Project Manager
Bureau of Eastern Remedial Action
Div. of Hazardous Waste Remediation

Enclosure

Granby Environmental Board
Town of Granby
RD #7 Box 369
Fulton, New York 13069

October 28, 1988

Gary Kerzic
Project Manager
New York State Department of
Environmental Conservation
50 Wolf Road
Albany, New York 12233

Dear Mr. Kerzic:

The Granby Environmental Board does not support the final selection of any remedial action at this time with regard to the Clothier Disposal Site. Neither the EPA's nor the DEC's Remedial Investigations are complete, as approximately two-thirds of the site area, or eleven acres, has not been tested for contamination. No plan can legitimately be considered until the extent of contamination is identified. The US Fish and Wildlife study of the Ox Creek wetlands considered the eleven acre area in question to be on-site and therefore did not include it as part of their study. It appears that both the Ebasco RI and the URS RI either assumed that the US Fish and Wildlife study encompassed this eleven acre area, or it was inadvertantly neglected by both consultants in their studies of the Clothier site. In either case, the Granby Environmental Board feels the data regarding this eleven acre area is pertinent information in the formulation of proposed alternatives. No final selection of alternatives for remediation should be formalized by way of a Record of Decision until testing of this area is completed and remedial alternatives revised in accordance with the results of testing the area in question. The EPA has stated that sample testing will be initiated within the next few months.

The Environmental Board also is convinced that Granby residents are in need of a Technical Advisor to assist us in the analysis and interpretation of the data regarding contamination thus far provided, and with the data that is to be forthcoming in the testing of the unexamined eleven acre area. As an example: there is a significant difference between the DEC and the EPA in their interpretation of the extent of soil contamination on site. The EPA has extimated that there exists 2800 cu. yds. of contaminated soil; the DEC;s interpretation, based on analysis of the same sets of data, is that soil contamination is much more widespread, ten times more extensive, at an estimated 28,000 cu. yds. This example is put forth as an indicator of why we believe it is imperative to secure independent review of the studies, and consultation regarding the remediation of the Clothier site. Toward this end, the Environmental Board fully supports the application that has been filed with the EPA for a technical advisor under the Technical Assistance Grant Program by FSDWAC (Fulton Safe Drinking Water Action Committee) on behalf of the citizen's group NO MORE (Neighbors Organized to Mend Our Rural Environment). We request that the citizens of Granby be allowed to participate in decisions regarding the remediation of Clothier to the fullest possible extent, and as fully informed as possible, i.e. with full benefit of the expertise of a technical advisor. Therefore, a delay in the ROD pending receipt and utilization of TAG funds as well as completion of the on-site RI, is fully indicated and expected by the Environmental Board.

If the DEC and/or the EPA believe that containment of any further off-site migration of contamination is indicated now, the Environmental Board has no objection to the proposed action to cover, vegetate and contain the sloped area of the site with rip-rap. However, we would view this action as an interim measure, not a final plan.

The Environmental Board also notes its objection to the failure to make the ATSDR Health Risk report available for public review. As of this writing the report still has not been released, and although it was discussed at the public meeting, comment regarding that report is withheld pending the opportunity to read it.

The Environmental Board is very interested in learning more about the role of the Presumed Responsible Parties in all activities relative to the Clothier site. Toward that objective, it is requested that all minutes of meetings, copies of agreements and correspondance between the EPA and/or the DEC and representatives of the PRP's be forwarded to the Environmental Board, care of Chairperson Virginia Gary. If it is necessary or requested that Freedom of Information form(s) be filed to facilitate your compliance with this request, please so indicate by contacting Ms. Gary. Since the EPA's Removal Action was completed in July, 1988, security at the site has been withdrawn. It is requested that negotiations with the PRP's regarding the need for continued maintainence of security and site restriction be resumed immediately. In the interim, it is requested that the DEC accept responsibility for securing and restricting the site.

Sincerely,

Virginia Gary

Virginia Gary, Chairperson
Granby Environmental
Board

Environmental Board members:
Diane Hartman
Lynn Lyons
Nancy Nolan
Kevin Wallace
Thea Wallace
Roger Wells

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233

Thomas C. Jorling
Commissioner

NOV 10 1988

Mrs. Virginia Gary
Chairperson
Granby Environmental Board
Town of Granby
RD #7, Box 369
Fulton, NY 13069

Dear Mrs. Gary:

Re: Clothier Disposal Site
Proposed Remedial Action

Thank you for your letter of October 28, 1988 regarding the Clothier Site Remedial Investigation/Feasibility Study (RI/FS) and the remedial measures proposed by the New York State Department of Environmental Conservation (NYSDEC) and the United States Environmental Protection Agency (USEPA).

The purpose of the Remedial Investigation/Feasibility Study (RI/FS) was to determine the nature and extent of hazardous waste contamination present on the "Clothier Site", which is the designation given to the approximately 5 acre area on which hazardous wastes were stored and handled. In addition, the U.S. Fish and Wildlife Service (USFWS) study of the Ox Creek wetland investigated the area into which contamination could have potentially migrated off the Clothier site. The USFWS study involved the collection of surface water and sediment from the creek area, as well as, plants, fish and small mammals which inhabit the wetland. The wildlife (plants, fish, small mammals) inhabiting an area, will generally accumulate contaminants in their tissues and will therefore act as an indicator of the presence of contamination in the soil/sediment and surface water. Given the fact that the fish, plants and small mammals did not show the presence of contaminants from the Clothier Site and because the sediment and surface water samples collected from the creek did not contain Clothier contaminants, coupled with visual inspections of the wetland which did not indicate the presence of drums of hazardous waste, the NYSDEC and USEPA feel it is unlikely that there is contamination in this 10-11 acre area in question. As stated at the October 5, 1988 meeting, the USEPA will sample this area in order to confirm this belief.

In the unlikely event that contamination is found in this 10-11 acre area, it will have no impact on the remedial plans presented in the Proposed Remedial Action Plan (PRAP). If significant levels of contaminants are found, the NYSDEC and USEPA will take the appropriate actions to remediate the area, separately.

The URS RI/FS and the Ebasco RI/FS differ in their estimation of the volume of contaminated soil to be remediated. As two engineering consulting firms who have independently investigated this site, they apparently have a difference of professional opinion. The estimation of contaminated soil volumes is based primarily on public health risk due to exposure to the soil. The determination of significant risk is by no means exact and is subject to individual judgement. An important point to bring out is that both URS and Ebasco have arrived at the same level of risk through their independent risk assessments. The difference exists in their judgements of what is a significant risk. In any event, the exact areas to be covered as part of the proposed remedial action would be determined by the NYSDEC, USEPA and the New York State Health Department, with public health and environmental protection as the major decision criteria.

The health assessment being performed by the Agency for Toxic Substances and Disease Registry (ATSDR) will involve a review of the RI/FS and any other pertinent information. A similar review has been performed by the NYSDOH who feel the health risk assessments in the RI/FS reports are accurate and who also feel that the proposed remedial actions will be protective of the public health. Mr. William Nelson of ATSDR stated at the public meeting that even though the ATSDR health assessment was not complete, his agency felt the proposed actions were adequate to remove any health risks that might exist from exposure to the site.

The Technical Assistance Grant (TAG) Program is administered by the USEPA through provisions set forth in the Superfund Amendments and Reauthorization Act of 1986 (SARA). After consulting with the USEPA on this matter, they inform me that although they are committed to involving the public in the hazardous waste site remediation program, they are equally committed to expeditiously remediating these sites. At the request of a member of the Granby community, the official comment period for review of the RI/FS and PRAP was extended from 21 days to 60 days. A public informational meeting was also held to present the findings of the RI/FS and to discuss comments and questions from the public. A technical assistant would certainly be beneficial to community understanding of the technical issues associated with this project, but the USEPA feels a technical assistant is not essential to involving the public in the remediation process.

As a site on the National Priorities List of Inactive Hazardous Waste Sites (NPL), the USEPA is responsible for all communications and negotiations with Potentially Responsible Parties (PRP). For information relating to the PRP's, I suggest you contact, Mr. Gregory Snyder, Esq., USEPA Region II, 26 Federal Plaza, New York, NY 10278 or call (212) 264-8157.

The issue of Mr. Clothier's continued practice of storing junk vehicles on the Clothier Site was discussed at the October 5, 1988 public meeting. To date, Mr. Clothier has not violated a State or Federal law by storing vehicles on his property. The NYSDEC periodically inspects the site to insure no hazardous wastes are brought on the site. The presence of these vehicles is undesirable to both the NYSDEC and USEPA as it is to you, but unless a law is violated, there is little that can be done. If Mr. Clothier is violating local ordinances by bringing these vehicles on his property, it is perhaps prudent that the Town of Granby institute enforcement actions.

Sincerely,

Gary T. Kerzic, P.E.
Project Manager
Bureau of Eastern Remedial Action
Div. of Hazardous Waste Remediation

Brace Tallents
Granby Town Supervisor
Town of Granby
R.D. #7 Box 369
Fulton, New York 13069

October 26, 1988

Gary Kerzic
Project Manager
New York State Department of
Environmental Conservation
50 Wolf Road
Albany, New York 12233

Dear Mr. Kerzic:

The Town Board of the Town of Granby submits our written response to the PRAP presented by the DEC and EPA at the October 5, 1988, public information meeting in Granby, N.Y. as follows: The Board is opposed to a ROD being concluded on this plan, based on:

1. Insufficient data has been collected on the site. Eleven acres have yet to be tested for contamination. The remedial investigation is not complete. The alternatives proposed do not take into consideration the possibility that this area may be grossly contaminated. A ROD finalizing any plan would be premature and not acceptable at this time.

2. Residents of Granby have organized a citizens' group (NO MORE) which has applied for funds under the EPA's Technical Assistance Grant Program to hire a technical advisor. The Town Board of Granby supports this application for TAG funds and believes a ROD should be delayed until the Town of Granby and its residents receive full benefit of expert technical advisement regarding remediation alternatives to be considered at the Clothier Disposal Site.

3. The Town Board seeks to support a remediation plan that would offer a permanent solution to the problem of contamination in our environment. The PRAP presented for the limited area that was investigated at the Clothier Site does not meet this standard. It addresses problems resulting from possible further surface migration only of contaminants into adjacent properties by containing the site,

   but does not address the clean-up of the contaminated groundwater or soil. Soil samples indicate that contaminants were found in soil in depths of up to twenty feet. The PRAP presented is not acceptable as a final plan.

The Granby Town Board is very concerned about the integrity and security of the site while further investigation and consideration of remedial alternatives continue. There were many comments and much discussion about this issue at the 10/5/88 meeting, but no resolution to the problem of continued dumping at the site has been forthcoming. The Town Board takes this opportunity to reiterate our request that the DEC and/or EPA take appropriate action to restrict access to the site and prevent any further dumping of vehicles or other actions which disturb current conditions of the site. Please advise regarding what actions are being considered and whom, specifically, within the DEC or the EPA the Town should contact for information regarding this matter. We believe that the need for site restriction is apparent and immediate, and that timely implementation of a plan to achieve this objective is necessary to protect any further degradation of the site from occurring.

Sincerely,

Brace Tallents

Brace Tallents, Town Supervisor

Jeanine Junco

Wm. A. Somers

Granby Town Board:
Rose Anthony Rose Anthony
Jeanine Junco
William Somers
Willie Webb Willie Webb

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233 -7010

Thomas C. Jorling
Commissioner

NOV 2 1988

Mr. Brace Tallents
Supervisor
Town of Granby
R.D. #7, Box 369
Fulton, NY 13069

Dear Mr. Tallents:

Re: Clothier Disposal Site
Proposed Remedial Action Plan

Thank you for your letter of October 26, 1988 regarding the Clothier Site and remedial actions proposed by the New York State Department of Environmental Conservation (NYSDEC) and the United States Environmental Protection Agency (USEPA) at the October 5, 1988 public informational meeting at the Granby Town Community Center. The following is a response to the issues raised in your letter, in the order in which they were presented.

1. The NYSDEC and USEPA have jointly performed extensive sampling of the Clothier property in the area on which hazardous waste activities occurred. A total of 70 (seventy) soil and 10 (ten) groundwater samples were collected from this approximately 5 acre area. In addition, the U.S. Fish and Wildlife Service (USFWS) has completed a two year study of the adjacent Ox Creek wetland in which sediment, surface water, plant and animal samples were collected. This study did not show the presence of any contamination which could be attributed to the Clothier Site. We have identified the need to collect additional sediment samples from a 10 to 11 acre area between Ox Creek and the site. From visual inspections and from our knowledge of hazardous waste handling activities that occurred at the site, it is unlikely that this area is contaminated, but this additional sampling will act as confirmation. The Record of Decision (ROD) and the proposed remedial actions will address the 5 acre area where hazardous waste activities occurred. In the event, the off site (10 acre) area is found to contain contamination, the NYSDEC and USEPA will take the appropriate action to remediate that area. The presence of contamination in the off site area will not have an impact of the proposed remediation of the site.

2. The NYSDEC and USEPA also support the Technical Assistance Grant (TAG) Program which will provide funding for concerned citizen's group to hire technical advisors. As with any

government grant program, an application requesting the funds must be completed and submitted to the appropriate government agency before funds can be awarded. As of the October 5, 1988 meeting, no application had been submitted to USEPA. I have been informed by USEPA that the application was recently received and that it will take a few months to process the application and award the funds, which would result in a delay of several months in the issuance of a ROD. At this time, the NYSDEC and USEPA feel it most prudent to continue with plans to remediate the site and not allow further delays.

3. Federal regulations set forth in the Superfund Amendments and Reauthorization Act of 1986 (i.e. SARA, PL 99-499) state that the USEPA shall,

> select a remedial action that is protective of human health and the environment, that is cost effective, and that utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable.

You will recall, during a July 30, 1987 public informational meeting, the NYSDEC and USEPA were proposing the use of thermal treatment to remove organic contaminants from the soil on the site. Public sentiment appeared to be strongly against the use of this treatment. The NYSDEC investigated the feasibility of several other treatment technologies. With the exception of thermal treatment, treatment technologies to remove hazardous wastes are mostly experimental and unproven. Additional soil samples collected since the July 30, 1987 meeting show the soil contamination to be significantly lower and far less extensive than originally thought. The USEPA completed a remedial action in July 1988 which removed the remaining drums of hazardous waste from the site, as well as, 300 cubic yards of contaminated soil. The remaining soil on the site contains only low levels of contaminants which do not pose a significant threat to public health or the environment. Groundwater samples did not contain contamination which would pose a public health threat or which exceed government standards for groundwater quality.

Since the completion of the USEPA removal activities in July 1988 and the subsequent discontinuation of the on-site security, the site owner has brought approximately 25 junk vehicles on the site. Although that is undesirable, it is not in violation of any State or Federal law pertaining to solid waste disposal. A representative of the NYSDEC office in Syracuse regularly inspects the site for the presence of hazardous waste. To date no hazardous waste have been brought on-site.

If you would like more information on this matter, I suggest you contact the legal affairs office, NYSDEC Region 7 Headquarters, 615 Erie Blvd. West, Syracuse, 13204 or call 315-426-7405.

Once again, thank you for expressing your concerns.

Sincerely,

Gary T. Kerzic

Gary T. Kerzic, P.E.
Project Manager
Bureau of Eastern Remedial Action
Div. of Hazardous Waste Remediation

bcc: w/incoming

R. Brazell - Region 7
S. Miller - Region 7

R.F.D. #3
Box 352
Fulton, N.Y. 13069
Aug. 22, 1987

Dept. of Environmental Conservation
Room 222
50 Wolf Rd.
Albany, N.Y. 12233

Attn: Mr. Gary Kerzic

Mr. Kerzic:

This letter advises the Dept. of Environmental Conservation of our objections and questions pertaining to the incineration of the remaining hazardous waste at the Clothier Site.

Our home, located on County Route 14, Town of Granby, is adjacent to the Clothier Site.

We have been concerned with the hazardous environment caused by the materials dumped at the Clothier Site but because they were being removed from the site we became less worried.

The consideration given to incineration revives our concerns. There was a fire at the site prior to the start of clean up at the site. We were at work but when we arrived home, a state representative was waiting. He advised us of the fire and said we would have been evacuated had we been home during the fire because of the possibility of hazardous elements in the smoke.

According to what we read in the newspaper, incineration is being considered because: the EPA is encouraging waste treatment on site rather than moving it, because of the "track record" of incineration, not wanting to "just see a site contained", and the thorough process of incineration; but nothing is said about the safety of incineration.

We want answers to the following: what type of incineration is being considered? What level of contamination will be emitted into the atmosphere? (In other words--how free of contaminates will the air be after the smoke from incineration is released?) What safeguards or protection is being taken to assure the safety of the inhabitants of the Clothier Site area?

Please response to our concerns.

Sincerely,
John + Marilyn Barrie
John & Marilyn Barrie

827 Forest Avenue
Fulton, New York 13069
August 3, 1987

Mr. Gary T. Kerzic, Project Engineer
New York State Department of Environmental
Conservation
50 Wolf Road
Albany, New York 12233

Dear Mr. Kerzic:

The arguments at the Granby public meeting last Thursday night about the use of inceration were unconvincing.

It is proposed that $20.3 million be spent incinerating 6 feet of soil over a 42-month period. The use of the incinerated soil is at best very limited, probably questionable, and a house can be built on it only "if one wants to." It received a 77 Evaluation Score.

Meanwhile, Bioreclamation received an 84 Evaluation Score at a cost of only $2.1 million. Site Capping and Bioreclamation received the highest score of 92 at a cost of $3.3 million.

Mr. Rothman of URS, looking very unhappy during the discussion on incineration, says that bioreclamation has a good chance of working, at much lower depths, after a year of experimentation. The operation you said would take 7-10 years.

I don't know what procedure should be used, but the arguments for incineration are not persuasive.

Sincerely,

Jos. Allerton

Joseph Allerton

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DIVISION OF SOLID AND
[illegible]

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233-4011

Thomas C. Jorling
Commissioner

September 2, 1987

Mr. Joseph Allerton
827 Forest Avenue
Fulton, New York 13069

Dear Mr. Allerton:

Re: Clothier Site
Remedial Investigation/Feasibility Study

Thank you for your letter of August 3, 1987 regarding the Remedial Investigation/Feasibility Study (RI/FS) performed on the Clothier Site.

The New York State Department of Environmental Conservation (NYSDEC) proposes to treat the soil contamination at the Clothier site through the use of a thermal treatment or thermal destruction process at a conservative cost estimate of $20.3 million. This assumes the total area of soil to a depth of six feet would need treatment. This cost is a worst case estimate for planning purposes and considers the maximum quantity of material likely to be encountered. Detailed additional sampling planned for the design phase will refine the quantitites and cost estimates. Actual implementation will be advertised for competitive bids to achieve the lowest possible price.

The NYSDEC and it's consultant have evaluated several types of biological, chemical and physical treatment processes. The Remedial Investigation/Feasibility Study addresses only those treatment technologies that are capable or providing satisfactory performance under these site conditions. We do not feel the use of thermal treatment is "very limited, and probably questionable." Comparing thermal treatment with other available technologies, we feel thermal treatment has a greater range of application and will be more successful than other technologies such as bioreclamation.

Thermal treatment processes have been used successfully and reliabily for several years by commercial facilities to destroy hazardous wastes at concentrations much higher than those found at the Clothier Site. The thermal treatment process is technically simpler and, therefore, less prone to failure than experimental techniques such as bioreclamation. In-situ biological treatment has never been used effectively to treat soil contaminated with a variety of wastes. The theory behind the bioreclamation process is similar to that used to treat sanitary sewage at facilities such as the Fulton Sewage Treatment Plant. As I'm sure you are aware, a sewage treatment plant efficiency id dependent on many variables which if not properly maintained will negatively affect the treatment process. These include sufficient food to mass ratio, nutrients, temperature and acclimated biological organisms. The organisms perform best under equalized stead-state conditions. In-situ biological treatment is prone to many more variables and is less capable of process control than treatment in a treatment unit. For instance, research has shown that for every 10°C decrease in temperature, biological activity will be decreased by 50 percent which translates into a ceasation or at best a decrease in the biological reaction which would remove the hazardous wastes. The presence of certain organic and inorganic contaminants may be toxic to the microorganisms necessary to digest the hazardous wates. As is the case with sewage treatment, the bioreclamation process will produce waste products or sludge from the microorganisms performing the reaction.

The bioreclamation process is sensitive to many variables which could potentially hinder the process. The evaluation score given in the RI/FS is not an absolute but rather an artificial rating system created for illustrative purposes in comparing alternatives. It is not capable of reflecting all concerns that the NYSDEC has for the bioreclamation process application. The estimated cost of $2.1 million can not be readily verified since there is no available cost data base due to the lack of other similar projects. The 7 to 10 year period mentioned at the public meeting is the estimated time it would take to perform the treatment. This is after the initial startup of the process is completed and assumes no delays due to operational difficulties.

The NYSDEC does not have resources to dedicate to the type of research project necessary to pursue a technology such as bioreclamation at a site where the likelihood of success is marginal at best. As you are aware, there are several hundred sites across New York State which also require action. In the interest of implementing an effective hazardous waste remedial program statewide, the most efficient remedial measures must be undertaken on a site by site basis.

Thermal treatment is the only feasible treatment alternative for use at the Clothier site. Physically removing the contaminated soil from the site is unacceptable for the obvious reason that you are moving the waste and not eliminating it. Without treatment, encapsulating and leaving the wastes on the site is the only other option. This is not preferred by the NYSDEC but will be implemented if thermal treatment is rejected.

Once again, thank you for your comments. If you have questions or comments, please feel free to call me at (518) 457-5677.

Sincerely,

Gary T. Kerzic

Gary T. Kerzic
Project Engineer
Bureau of Eastern Remedial Action
Division of Solid and Hazardous Waste

GTK/lmd

bcc: w/inc. D. Brazell, Region 7
S. Miller, Region 7

95 Whitcomb Rd.
Fulton, NY 1306
July 31, 1987

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AUG 04 1987
BUREAU OF EASTERN REMEDIAL ACTION
DIVISION OF [illegible]

NYSDEC
50 Wolf Rd. - Room 222
Albany, N.Y.

Re: Clothier site
INCINERATION

Dear Mr. Kerzic,

Enclosed is an article from a newsletter of the Environmental Defense Fund. It seems that you are probably aware of the need to test the ash before it is "left on site and graded to provide a free-draining surface".

As a resident of the area I am committed to concerns about the contamination of our groundwater. Thank you for inviting an expression of my concern about the testing of the ash.

Sincerely,
Patricia C. Guarre

Enc.(1)

EDF COLUMN

Municipal Waste Incineration: Doll

By Michael E. Herz, attorney in EDF's New York headquarters, and Dr. Richard A. Denison, scientist in the Washington office.

MICHAEL HERZ

DR RICHARD DENISON

The United States is having increasing difficulty finding places for its garbage. As a result of growing amounts of solid waste, shrinking landfill space, stricter regulations, and rising costs, we have seen renewed enthusiasm in some quarters for a trash processing method already tried—and largely abandoned—in this century: incineration.

Incineration previously fell out of favor because of unacceptable air pollution, and concern over the new wave of "resource recovery facilities" has understandably focused on what comes out of the stack. The new incinerators, although still requiring careful scrutiny, probably *can* limit air pollutants to acceptable levels *if* properly designed, sited, and operated. EDF scientists, however, are more concerned about the other major product of incineration, the ash.

As much as a third of the trash fed into an efficient incinerator is left behind as ash when the fire goes out. The proposed Brooklyn Navy Yard facility in New York, for example, would generate 1,000 tons of ash every day. Disposal of all that ash is a tremendous problem, further complicated by the chemical constituents of the ash.

EDF has accumulated a large amount of troubling data on ash toxicity. Of primary legal and public health concern are the dangerously high levels of heavy metals, particularly lead and cadmium. Burning does not destroy these chemical elements, which are already in the waste stream, but rather concentrates and transforms them into a readily dispersed form that much more easily reaches and is taken up by people, plants, or animals.

Though incinerator ash is not listed as a hazardous waste, it nonetheless qualifies as such if it has any of four "hazardous characteristics" specified by Federal law: ignitability, corrosivity, reactivity, or toxicity. Data gathered by EDF from incinerators across the U.S. show that fly ash (the particles trapped in pollution control devices) failed EPA's toxicity test every time because of high lead and cadmium levels. Bottom ash (what's left on the furnace grates), both alone and combined with fly ash, failed 25 to 50% of the time.

Thus, under current law, incinerator ash is often a hazardous waste. This is not only an environmental problem. It is also a major economic problem for industry and for municipalities that own or use incinerators. Especially stringent rules governing the storage, treatment, transport, and disposal of hazardous wastes make such wastes more expensive to manage than nonhazardous wastes. Yet all the financial planning for existing or proposed incinerators rests on the assumption that the ash can—now and forever—be disposed of in ordinary landfills.

Economic Implications of EDF Data Are Well Known to the Industry

When EDF released its ash toxicity data, at a press conference in Washington, D.C., Wall Street's financial news wire immediately ran the story. It also caught the attention of San Francisco officials considering the Bay Area Resource Recovery Facility (BARRF). As one city official acknowledged, "The plant won't be economical and wouldn't be able to go forward if the ash is found to be a hazardous waste." San Francisco later voted against sending garbage to BARRF, specifically citing the possible ash hazard as one of the reasons.

Within days of EDF's press conference, Congress scheduled hearings on the ash hazard and invited representatives of EDF, EPA, and the National Solid Waste Management Association to appear. Two high-ranking EPA officials confirmed the seriousness of the problem and admitted that EPA has not been sufficiently concerned nor has it made it clear to incinerator owners and operators that they must test their ash.

Members of the Congressional panel harshly criticized EPA's request for more time to study the issue. EPA then agreed to issue new ash testing guidelines promptly to the incinerator industry, but to date has not done so. EDF scientists and attorneys have been meeting with EPA staff to insure that such guidelines are adequately protective.

EDF LETTER
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will be greater attention to and financia

Hazardous Substances in Commonly Used Products
tic colored inks, p
batteri

support for recycling and source separ tion. These methods can compleme incineration, not only by reducing t amount of trash, but by targeting suc items as batteries that contain the tox substances which end up in the ash.

According to one industry offici treating ash as a hazardous waste "mea finito, morte, the end, for the resour recovery industry." While this is almc certainly an exaggeration, the *financ* implications of hazardous ash have fina drawn the attention of industry, Capi Hill, and EPA to this important pub health and environmental issue.

Continued scrutiny and pressure fr EDF and the public may produce regu tory reforms, better ash manageme practices, more recycling and sour separation and—ultimately—reductio in the use of hazardous substances manufacturing the myriad products t end up in the solid waste stream. Any all of these would be important st toward rational management of our so waste.

Court Rejects Governor's Defiance of Calif. Toxics Law

Ruling that the legal arguments of environmentalists and organized labor were "totally convincing," a state judge ordered California Governor George Deukmejian to add 201 chemicals to the list of substances covered by the voter-enacted Safe Drinking Water and Toxic Enforcement Act of 1986.

The Governor had issued a list of only 29 chemicals, acting at the request of the Chamber of Commerce and industry groups. Under the new law, passed as Proposition 65 by a 2-1 voting margin last November, the Governor must list all chemicals that are "known to the state" to cause cancer or birth defects and other reproductive disorders.

EDF, the AFL-CIO, and six other groups sued the Governor within hours after the "short list" was announced. In reaching his decision, Superior Court Judge Roger K. Warren said that the Governor's rationale for listing only 29 chemicals was "strained and tortured," and that the groups suing him had met "the highest possible standard" in showing that the additional chemicals should be added immediately to the list.

At a press conference, Governor Deukmejian said he had not yet decided whether to appeal. The Governor is being represented by a private law firm because the state's Attorney General declined the case, after finding that a "short list" was legally indefensible in light of the law's clear provisions.

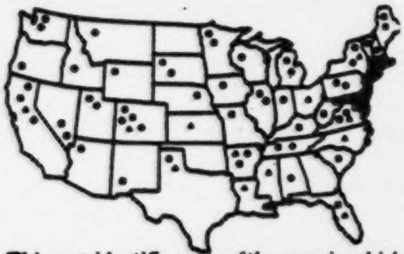
An Obsolete Approach To Cancer Protection

"The short list would not only have reduced Proposition 65 to a fraction of its intended coverage, but would also have undermined fundamental cancer policy," said EDF attorney David Roe, the law's principal author. The Governor argued that the only chemicals that should count as "known" cancer-causers were those based on data from after-the-fact studies of cancer in humans—thus ruling out controlled testing of laboratory animals.

"The 'dead-bodies' approach to cancer protection has been obsolete for decades," said Roe. "You either use animals, or you have to wait to regulate until many people have died. California's own cancer policy has been based on animal tests for years, as has the Federal Government's."

"Organized labor across the country has a very strong interest in seeing that Proposition 65 is implemented," said Stephen P. Berzon, attorney for the AFL-CIO and lead counsel in the case. "Its right-to-know provisions, among others, are a major advance in the law, and will give workers powerful new protections against cancer and birth defects." ❦

Generosity of Members Brings EDF Full $150,000 Matching Grant



This map identifies some of the areas in which EDF and EIE are working with state and loca organizations to solve environmental problems

The Public Welfare Foundation awarded EDF a matching grant of $150,000 last fall to support its Environmental Information Exchange (EIE). Thanks in large part to its members, EDF has matched the entire amount. EIE is also supported by grants from The Joyce Foundation, the Gund Foundation, the Jessie B. Cox Charitable Trust and the Ittleson Foundation.

EDF formed EIE more than a year ago to offer regional and state environmental groups the scientific, economic, and legal expertise of EDF staff as well as a computer network to facilitate exchange of information and development of effective strategies. Contact with state groups also helps EDF keep abreast of the most widespread and urgent issues on the state and regional level.

An example of the way EDF can help state counterparts is related in a recent letter that Peter Anderson, President of Wisconsin's Environmental Decade, wrote after EDF toxicologist Dr. Ellen K. Silbergeld appeared before Wisconsin's Department of Natural Resources on the problems of incinerators.

Silbergeld's appearance "was a smashing success," he wrote. "As you know, Wisconsin is producing over 3 million tons of municipal garbage a year. Faced with groundwater contamination from even the most carefully designed landfills, the DNR staff is encouraging incineration as a 'quick fix' with almost no scrutiny of the toxic ash and air discharges from incineration that make landfill problems pall in comparison. Today, 38 incinerators are in various stages of construction. Once built, they will effectively preclude recycling for the remainder of their lives.

"Reeducating the regulators to these concerns is a slow and delicate process. It required someone of Ellen's unequale technical stature and equally important ability to convince opponents that she i completely open to interpret the facts without preconceptions.

"In this, she succeeded beyond our wildest hopes," he reported. DNR has invited hi group to form a joint committee to develop appropriate controls for incineration. "Th should lead, finally, to serious consideration of recycling," he concluded. ❦

EIE Holds Second Annual Conference

Staff from 10 of the 11 state groups in the EIE network and 14 EDF staff from all five offic attended EIE's second annual conference in Washington, D.C., on April 9-10. Above (l to r) a Roxanne Qualls, Ohio Public Interest Campaign, Howard Learner, Business and Profession People for the Public Interest, Peter Anderson, Wisconsin's Environmental Decade, and Dav Fanning, EDF.

Participants focused on issues of common interest, including source reduction, incinerati and ash, California's Proposition 65, pesticides, and transport of high level radioactive was and discussed how these issues are handled at the state level and what EDF can do through E to promote solutions.

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233-4011

Thomas C. Jorling
Commissioner

September 2, 1987

Ms. Patricia C. Guarrera
95 Whitcomb Road
Fulton, New York 13069

Dear Ms. Guarrera:

Re: Clothier Site
Remedial Investigation/Feasibility Study

Thank you for your letter of July 31, 1987 and the enclosed newsletter from the Environmental Defense Fund.

A point I tried to articulate at the July 30, 1987 public meeting was that if the ash or treated soil contained concentrations of metals (e.g. cadmium, lead, mercury, zinc) at levels high enough to define it as a hazardous waste, treatment will be pointless and therefore not performed. We do not believe the metals concentrations to be of concern, but we need to take additional samples to better define the exact extent of contamination.

Since the proposed thermal treatment will not remove the metals, additional treatment may be necessary. To ensure the efficiency of the treatment, the ash will be regularly tested.

Once again, thank you for your letter. If you have further comments, please feel free to call me at (518) 457-5677.

Sincerely,

Gary Kerzic

Gary T. Kerzic
Project Engineer
Bureau of Eastern Remedial Action
Division of Solid and Hazardous Waste

GTK/lmd

bcc: w/inc. D. Brazell, Region 7
S. Miller, Region 7